Mental Health Issues

In this Issue:

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The FJPH, a Fiji based Journal published for Public Health practitioners, public health researchers, clinicians and all allied health practitioners. Our goal is to provide evidence based information and analysis they need to enable them to make the right choices and decisions concerning their health and health services provided to ensure better health for all.

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Tables, Figures and Images
• Tables, figures and images should be the original work of the manuscript's authors and should be included at the end of each manuscript.
• Captions should describe what the table/figure/image shows and the conclusion that should be drawn.
• Labels and axes should be clearly marked and readable. all tables, figures, and images should be submitted in high resolution please.
• References

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The theme of this issue is mental health- an important but often neglected topic both globally and regionally.

The burden of mental disorder is enormous; combined with substance use, neurological and developmental disorders, it is responsible for over 10% of the global disease burden. One in 4 people will suffer from mental, neurological or substance disorder during their lifetime, and estimated more than 800 thousand death is due to suicide.

However, mental health is often neglected among policy makers and even among health practitioners. Treatment coverage is low, with limited number of mental health specialists, and budget dedicated to mental health among the overall health budget is less than 2% in most Pacific Island countries. Stigma and discrimination towards people who are suffering from mental health aggravates the situation.

To overcome the situation, the World Health Assembly adopted the Comprehensive Mental Health Action Plan 2013–2020. It represent a formal recognition of the importance of mental health for WHO’s 194 member states and has a set of agreed global targets to achieve by 2020.

Also, the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development — adopted by world leaders in September 2015 at UN Summit — addresses the mental health issues as part of broader NCD target (Target 3.4), and the substance abuse issues (Target 3.5).

• SDG Target 3.4: By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.
• SDG Target 3.5: Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.

Related to the Pacific Island countries, Target 3.c stresses the importance of increasing health finance and human resource development.

• SDG Target 3.c: Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

There is increasing evidence that with proper care, most people with mental disorder can recover and live a meaningful life in the community. We have tools and programmes, such as Mental Health Gap Action Programme, to improve the life of person suffering from mental disorders, to increase mental health awareness to fight stigma and discrimination, to prevent suicide, to reduce harmful use of alcohol etc.

Some of the challenges we are facing in Fiji and the Pacific includes lack of mental health funding, lack of understanding of mental health, scarce mental health workforce and importantly, lack of quality data and research. Mental health research in Pacific Island Countries is scarce and I am delighted to introduce 12 papers in this issue. I hope that more researchers and practitioners increase interest in this important area in the future.

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Depression and Suicide Risk in the Republic of Fiji: Results from a Pilot Study


Keywords: Depression, Suicide Risk

Abstract

There is increasing alarm in the Republic of Fiji about suicide within the country. While proximal stressors such as family conflict, work difficulties, or financial difficulties are often cited as the reason for suicide, there has been less information available about the role that mood disorders may play in suicide risk. This cross-sectional study assessed depression, anxiety and suicide risk in emergency department patients in two locations in Fiji: Lautoka Hospital and Colonial War Memorial Hospital. A total of 86 patients participated. We found 61.7% met criteria for probable depression, 28.9% met criteria for probable anxiety disorder and 23.3% were at risk for suicide. 8% of the participants had one prior suicide attempt. Suicide risk was correlated with depression but not demographic factors. Conclusion: In this small sample of non-psychiatric patients we found surprisingly high rates of depression and suicide risk and these were correlated. Future work should further examine the role of depression in suicide in Fiji.

Introduction

Fiji is a group of more than 332 islands in the South Pacific and has a population of approximately 875,000. The two largest islands, Viti Levu, and Vanua Levu are home to the majority of the population. The capital city, Suva, and the second largest city, Lautoka are both located on Viti Levu. The islands are home to two primary ethnic groups: iTaukei (ethnic Fijians) and Fijians of Indian Descent (FOIs) which are represented in close to equal numbers. The iTaukei can trace their roots back to the first Polynesian settlers while most FOIs are descendants of indentured servants from various parts of India who migrated around the turn of the last century.

Across ethnicities in Fiji, there is alarm over high suicide attempt and completion rates. Booth and colleagues found that the suicide rate in Fiji was the third highest in the world (Booth, 1999) with FOIs at particularly high risk of completed suicide. And, more than a decade later, the high suicide rate appears to remain elevated and alarming to police officials, who keep official records (Gibson, 2013). The available data remain largely descriptive and most studies do not include potential mental illness precipitants (Henson, Taylor, Cohen, Waqabaca, & Chand, 2012; Waqiniole et al., 2012). Some studies have indicated that FOIs and females specifically are at high risk for suicide attempts and completions (Haynes, 1984; Roberts, Cohen, Khan, & Irava, 2007) while other studies indicate that suicide risk may not have gender or ethnicity differences (Aghanwa, 2000). Due to the alarming rates of completed suicides in Fiji, there has recently been a national campaign to identify precipitants of suicide and investigate whether there are particular warning signs that would be helpful in this island nation.

One aspect of suicide that has been extensively studied in high income countries is the psychiatric diagnoses that precede a completed suicide. In high income countries, most studies have shown an association between premorbid depression and either attempted or completed suicide (Beghi, Rosenbaum, Cerri, & Cornaggia, 2013; Maniam et al., 2014). Premorbid anxiety is less well established but may also play a role (Eikelenboom, Smit, Beekman, & Penninx, 2012; Sareen et al., 2005). As a result of these findings, the United States has allocated significant resources at the national level in order to identify and treat symptoms and precipitants of suicide (e.g., National public service announcements, National suicide hotline, 2012 Surgeon General’s National Strategy to prevent suicide).

There are no corresponding population level data describing the prevalence of depression or anxiety in Fiji at present. While suicide risk has not been well studied within the country, completed suicide rates have been studied. Most suicide data are collected from police registries. There are several descriptive studies of depression (Aghanwa, 2000), but only one on anxiety (Ginter, Glauzer, & Richmond, 1994), in the Fijian population. One other confounder is a lack of diagnostic validity in psychological instruments used to assess depression, anxiety and suicide in Fiji. One instrument has been validated for depression in iTaukei adolescent females: Center for Epidemiological Studies-Depression (CES-D) (Opoliner, Blacker, Fitzmaurice, & Becker, 2013). There are no validated measures to assess suicide risk or anxiety in this population.

In this context, our team was invited to Fiji by the Dean of the Fiji National University-School of Medicine to assist the emergency department in planning for the mental health needs of the patients that frequent the emergency centers in the two largest hospitals in Fiji: Colonial War Memorial Hospital (CWMH), and Lautoka Hospital. This pilot study explored the relationships between suicidal risk, depression, and anxiety in a non-psychiatric sample. While these factors have been extensively studied in many cultures, little is currently known about the way they may be conceptualized in historically isolated Oceanic societies. We hypothesized that patients who were at risk for suicide would have elevated rates of depression and anxiety compared to those who were not at risk.

Method

All data collected were anonymous in nature. The voluntary nature of the assessment was explained verbally and they were also provided with written information on the mental health assessment. This study was approved by the Fiji National University-Houston Institutional Review Board. A cross-sectional study was conducted in two emergency departments in Fiji. Patients were eligible to participate if they were waiting to be examined or treated in the emergency department (Suva) or the emergency and acute care clinics (Lautoka) during the sampling interval. Investigators chose several time points throughout the survey (both day and evening) which resulted in multiple samples at each location.

We utilized standard self-assessment instruments to assess for depression, anxiety and suicide risk. While these studies have not yet been validated in Fiji, they have been used in many low-middle income countries (Suh et al., 2013; Yang, Ding, Hu, Zhang, & Sheng, 2014; Zhao, Zhao, Xiao, Yang, & Zhang, 2013). We utilized the Fiji validated CES-D in English for depression, the Hospital Anxiety and Depression Scale-Anxiety subscale for anxiety (HADS-A), and the Suicide Behavior Questionnaire-Revised (SBQ-R) for suicide risk (Myklethun, Stordal, & Dahl, 2001; Osman et al., 2001; Radloff, 1977). These three questionnaires have been validated in a number of populations and are considered standard assessment instruments (Bluml et al., 2013; Kazemi et al., 2013; Zhang, Sun, Kong, & Wang, 2012). For the CES-D, we used a cutoff score of 16 to identify a case of probable depression. We used a cutoff score of 11 on the HADS-A to identify a case of probable anxiety. The SBQ-R cutoff score of 7 was utilized to identify a case of suicide risk.

The following demographic information was ascertained: gender (male or female), age (18-24, 25-34, 35-44, 45-64, 65+), race (Fijian or non-Fijian), number of years in Fiji, current employment status, and education level.

References

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65+), ethnicity (Ethnic Fijian, Indo-Fijian, other), marital status (currently married, previously married, single, widowed), religion (Christian, Hindu, Other), education (none, primary, secondary, tertiary, other) and reason(s) for emergency center visit. Surveys were collected for 3 consecutive days in CWMH (36 patients) and 3 consecutive days in Lautoka (50 patients). For patients who were able to speak English but unable to read English and still wanted to participate; investigators read the questions verbatim to the patient and asked the patient to indicate his/her responses. In some cases, English was not a primary language. In those instances, we asked hospital personnel who were working in the area to translate the questionnaire to the patient and mark answers as patient indicated. Not all participants fully answered all measures (86 completed SBQ-R, 83 completed HADS-A, and 68 completed CES-D). In cases where measures were not fully completed we used numerical value zero for subsequent correlations.

Ethics approval for this study was obtained from the Ethics Review Board, UTHealth, University of Texas Health Science Center, Houston, Texas and the Fiji National Health Research Ethics Review Committee (FNHRERC), Ministry of Health Medical Sciences, Suva.

**Sample Characteristics**

Table 1 demonstrate that ninety-four patients were invited to participate and eight refused for a response rate of 91%. 86 individuals (44% male, 55% female, 1% no-answer) participated in the present study. Participants came from two sites in Fiji: Lautoka (59%) and Suva (41%). The participants were iTaukei (44%), FOIs (52%) or other (4%). Population data suggests that FOIs are 38% of overall population while iTaukei make up 57% of population and 5% are classified as other. 55% of respondents were Christian, 35% were Hindu, and 10% were other. The age distribution of our participants was as follows: 22% were between 18-24 years, 68% were between 25-64 years and 10% were 65 years old or older. 47% of our sample was married, 31% were single, 7% were widowed and 14% were previously married, and 1% did not answer. Educational attainment: 19% achieved a primary education, 45% achieved a secondary education, 35% achieved a tertiary education and 1% indicated other education (Table 1).

**Table 1: Demographics**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Male</th>
<th>44%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>55%</td>
</tr>
<tr>
<td>Site</td>
<td>Lautoka</td>
<td>59%</td>
</tr>
<tr>
<td></td>
<td>Suva</td>
<td>41%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>iTaukei</td>
<td>44%</td>
</tr>
<tr>
<td></td>
<td>FOIs of Indian Descent</td>
<td>52%</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>4%</td>
</tr>
<tr>
<td>Age Group</td>
<td>18 - 24</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>25 - 34</td>
<td>28%</td>
</tr>
<tr>
<td></td>
<td>35 - 44</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>45 - 54</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>55 - 64</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>65+</td>
<td>10%</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Currently Married</td>
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<tr>
<td></td>
<td>Previously Married</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>Widowed</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>Did not answer</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Statistical Analyses**

Statistical analyses were descriptive given convenience sample and sample size. Missing variables were handled using pairwise deletions. Relationships between variables were examined using spearman correlation to account for the ordinal nature of many of the instruments in the study. Fisher’s exact tests were utilized to examine group differences in anxiety and depression across a number of demographic attributes (e.g., survey location, sex). In the present study with a small sample size, these tests are more precise than chi-square difference testing. Generalized linear modeling and regression techniques were used to further examine the clinical variables. Analyses were performed using SAS 9.3 statistical software.

**Results**

Table 2 shows that 61.7% of patients surveyed met criteria for depression (CES-D score of 16 and above). 28.9% of patients surveyed met criteria for anxiety disorder (HADS-A cutoff score of 11 or higher), and 23.3% were at risk for suicide (SBQ-R cutoff score of 7 or higher and 8.14% of our sample had at least one prior suicide attempt (Table 2).

**Table 2: Clinical Variable Cutoff and Classification Percentages**

| CES-D Cutoff | Score 0 - 15 | 38.2% |
|             | Score 16 + | 61.7% |
| HAD Case v. Non-Case | Non-Case (Score 0 - 10) | 71.1% |
|             | Case (Score 11 +) | 28.9% |
| HAD Classification | "Normal" (Score 0 - 7) | 38.6% |
|             | "Borderline" (Score 8 - 10) | 32.5% |
|             | "Case" (Score 11 +) | 28.9% |
| SBQR Cutoff | Score 0 - 6 | 76.7% |
|             | Score 7 + | 23.3% |

We assessed whether there was a correlation between suicide risk and depression. In participants who met criteria for depression, there was a correlation with both total suicide behavior risk score ($p_1=0.467, p<0.001$) and being at risk for suicide ($p_2=0.293, p<0.05$).

We assessed whether there was a correlation between suicide risk and anxiety. In participants who met criteria for anxiety, there was a correlation with total suicide risk behavior score ($p_3=0.256, p<0.05$) but not for being at risk for suicide ($p_4=0.112, p ns$) (Table 3).
**Table 3: Spearman Correlation Coefficients, Means, and Standard Deviations**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Site</th>
<th>Sex</th>
<th>Race</th>
<th>Religion</th>
<th>Age</th>
<th>Marital Status</th>
<th>Education</th>
<th>CES-D Case</th>
<th>HAD Case</th>
<th>SBQR Total Score</th>
<th>SBQR Case</th>
<th>Mean</th>
<th>SD</th>
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<td>--</td>
<td>--</td>
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<td>--</td>
<td>--</td>
<td>0.5862</td>
<td>0.4954</td>
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<td>Sex</td>
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<td>--</td>
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<td>--</td>
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<td>-0.60***</td>
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<td>--</td>
<td>--</td>
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<td>Age</td>
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<td>-0.03</td>
<td>0.16</td>
<td>1.00</td>
<td>--</td>
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<td>0.32***</td>
<td>-0.33**</td>
<td>-0.65***</td>
<td>-0.43***</td>
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<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>2.1744</td>
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<td>CES-D Case</td>
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<td>-0.01</td>
<td>0.06</td>
<td>-0.00</td>
<td>0.04</td>
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<td>--</td>
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<td>0.6176</td>
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<tr>
<td>HAD Case</td>
<td>0.01</td>
<td>-0.10</td>
<td>0.06</td>
<td>-0.04</td>
<td>-0.02</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.40***</td>
<td>1.00</td>
<td>--</td>
<td>--</td>
<td>0.2892</td>
<td>0.4561</td>
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<tr>
<td>SBQR Total Score</td>
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<td>0.04</td>
<td>0.05</td>
<td>0.10</td>
<td>-0.03</td>
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<td>0.01</td>
<td>0.47***</td>
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<td>1.00</td>
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<td>0.09</td>
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<td>0.79***</td>
<td>1.00</td>
<td>0.2326</td>
<td>0.4249</td>
</tr>
</tbody>
</table>

SBQR Case = SBQR scores 7 or greater, HAD Case= HAD score 11 or greater, CES-D Case= CESD scores 16 or greater, SBQR total= SBQR total score * = p < 0.05, ** = p < 0.01, *** = p < 0.001

Descriptive statistics indicated that the clinical variables (scores on the CES-D, HAD, and SBQR) were not reliably correlated with any of the demographic variables. Correlations, means, and standard deviations for all variables may be seen in Table 2, and frequencies for the demographic variables may be seen in Table 1. The distributions of the clinical variables indicated that a high percentage of individuals met or exceeded the respective cutoff scores for concern. Histograms for these variables may be seen in Figure A.

Fisher’s exact test was used to evaluate the relationship between the demographic variables and the clinical variables by each respective cutoff score. Results indicated that none of the demographic variables (site, age, education, gender, race, religion or gender) demonstrated reliable differences across any clinical variable classification.

Generalized linear modeling further assessed the relationship between scores on the clinical measures and the demographic variables. Scores on the CES-D, HAD, and SBQR were individually regressed on five of the demographic variables: site, sex, race, religion, and education. CES-D scores were not reliably predicted from the demographic variables (F(10,55) = 1.17, p = 0.33). Similarly, HAD scores were not reliably predicted from the same variables (F(10,70) = 1.24, p = 0.28). Finally, the demographic variables did not reliably predict SBQR scores (F(10,72) = 1.64, p = 0.11).

**Figure A: Histograms for CES-D, SBQR, and HAD Questionnaires**

**Discussion**
In this study we found a surprisingly high rate of depression in the sample. Excluding those who did not answer CES-D questions, 61.7% of the sample met criteria for probable depression. Using only severe symptoms as an indicator (CES-D scores 30 or higher), this study found that 16.1% had severe symptoms: a surprisingly high rate. By contrast, an emergency department in the US found the rate of severe symptoms was 10% using the same measure (Mimiaga et al., 2010). In this study, we also found a significant correlation between depression and suicide risk in an emergency department sample in Fiji. While other countries have demonstrated that a similar correlation between depression and suicide risk, to our knowledge, this is the first study that has identified this particular relationship in a non-psychiatric sample in Fiji. Aghanwa found that depressive disorder was common in patients who were hospitalized for non-fatal suicide attempts (Aghanwa, 2000) in Fiji and this study...
further supports the correlation between depression and suicide risk. There was not a significant correlation between suicide risk and anxiety in our study. While the total SBQ-R scores were correlated with anxiety, those who were at risk for suicide (based on cutoff scores of SBQ-R measure) were not significantly correlated. Anxiety and suicide risk has been less well established in the literature in developed countries and this mixed result is consistent with the literature.

A finding which warrants additional research is that none of the demographic variables were correlated with any of the three measures of interest: CES-D, SBQ-R, or HADS-A. In this sample neither gender nor ethnicity, were correlated with suicide risk (Table 4).

Table 4: Suicide Risk by SBQR Score

<table>
<thead>
<tr>
<th>Population</th>
<th>Suicide Risk</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at Risk</td>
<td>At Risk</td>
<td>Total Scored</td>
</tr>
<tr>
<td>Male Fijians of Indian Descent</td>
<td>13</td>
<td>7</td>
<td>20%</td>
</tr>
<tr>
<td>Female Fijians of Indian Descent</td>
<td>20</td>
<td>27</td>
<td>25%</td>
</tr>
<tr>
<td>Male iTaukei</td>
<td>18</td>
<td>2</td>
<td>20%</td>
</tr>
<tr>
<td>Female iTaukei</td>
<td>11</td>
<td>6</td>
<td>17%</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>18</td>
<td>80</td>
</tr>
</tbody>
</table>

Data taken from samples with both sex and race data provided. 

While our sample size was small, and the limitations of the survey design preclude conclusions about whether these factors are truly independent, it is noteworthy. We would recommend a larger study of non-psychiatric patients to determine if this is a reliable result in Fiji. Patients who are identified and assessed for depression and anxiety in a hospital setting, are often seen after suicidal ideations or attempts in Fiji (Aghanwa, 2000). It may be that only those who are more severely ill are captured with Fiji’s current detection methods.

Our study had a number of limitations that are important and results should be interpreted with caution. We used a convenience sample of emergency department patients. Convenience samples can be biased due to the non-random nature of the sample. Future studies should utilize a random sampling approach. Additionally, we used translators who were not specifically trained on the measures and they may not have utilized clear translations but rather interpretations when assisting. The reliance on these translators may have biased our results. We also allowed family members to assist or be involved if all, including the participant, agreed. Although we do not think that was evident here, it is possible that patients may have underreported symptoms in the presence of witnesses or helpful family.

In conclusion, this pilot study found a correlation between depression and suicide risk in a sample of emergency department patients in Fiji. Further work to clarify the reliability of this finding is warranted.

References


Factors Associated with Readmissions within one Month of Release (Released on Trial) from St. Giles Psychiatric Hospital in Fiji in 2010

O. Chang*, D. Hillier, S. Gadari, S. Khan†, M. Allen†

Keywords: Readmission, Released on Trial(ROT)

Abstract

Context and Setting: Psychiatric readmissions to hospital are a complex event that has been linked to a variety of factors. Of particular interest are readmissions within one month of discharge (rapid readmissions) as these are often considered “failed admissions” and can be used as a performance measure of the mental health service. Factors such as lack of social support, poor discharge planning; non-adherence to medication, lack of follow-up post-release have been implicated but to date there has been no formal research conducted to verify what are contributing factors to rapid re-admissions in Fiji.

Aims: This study aims to (Mgutshini T, 2010) determine the factors associated with readmission within the ROT period; (Silva, Bassani, Palazzo, 2009) consequently identify potential risk factors associated with rapid readmissions; and (Yussuf, Kuranga, Balogun, Ajiboye, Issa & Adegunloye, et al., 2008) to determine the rate of readmission for those on ROT.

Methodology: This is a retrospective study utilizing information from patient folders who were ROT in 2010. Results: In 2010 there were 214 patients not admitted within the release on trial (NAWROT) period of one month and 25 patients admitted within the ROT period (AWROT). Significant findings between the two groups are: the AWROT group was older and more likely to have had no formal education compared to the NAWROT group; while the NAWROT were predominantly of the Christian faith, they were prescribed haloperidol decanoate more frequently and had less frequency of medication given per day compared to those in the AWROT group.

There were no significant differences between the groups in terms of length of stay in hospital; number of previous admissions; diagnosis; occupational status; marital status; location of residence; adherence to medication; history of substance use, aggression or suicide.

Conclusions/Recommendations: This study had a readmission rate of 48.8% and on average those rapidly readmitted did so within 16.3 days of release from hospital. Factors associated with rapid readmission were older age; lack of formal education; higher daily frequency of prescribed medication; not belonging to the Christian faith; and less use of depot preparation of haloperidol decanoate. There were several limitations associated with this study including small sample size and up to 68% unrecorded data in certain areas. The results should be interpreted cautiously and may provide basis for further investigation.

Introduction

Psychiatric re-admissions to hospital are a complex phenomenon that is unique to the individual. A variety of factors has been implicated in this process but vary widely depending on the quality, type and availability of mental health service and patient characteristics (Mgutshini T, 2010).

There has been a global increase in psychiatric re-admission rates which has been associated with the occurrence of de-institutionalization of mental health services frequently without proper or adequate community mental health resources (Silva, Bassani & Palazzo, 2009; Yussuf, Kuranga, Balogun, Ajiboye, Issa & Adegunloye, et al., 2008).

Factors often associated with psychiatric re-admissions include lack of adherence to medication, poor social support and presence of violence (Silva, Bassani & Palazzo, 2009; Bernardo & Forchuk, 2001).

Readmissions to psychiatric facilities within one month of discharge are of particular interest as they are often considered to be failed admissions (Jones, 1991; Dixon, Robertson, George & Oyebode, 1997). They are also commonly accepted performance indicator to measure service effectiveness. These may be the result of poor discharge planning and/or inadequate community outpatient follow-up or certain patient characteristics (Jones, 2007).

Factors such as patient’s psychiatric diagnosis; length of stay in hospital prior to discharge; lack of discharge planning and follow-up post-discharge; patient gender; lack of social support; adherence to medication; presence of substance abuse, etc. are few factors implicated in re-admission within one month of discharge (Bernardo & Forchuk, 2001; Jones, 2007; Amer-Siddiqi, Ng, Aida, Zuraida & Abdul, 2008).

Research in this area is limited and has mainly been done in developed countries. In addition, those studies conducted in neighboring Southeast Asian countries with similar settings have resulted in variable outcomes (Amer-Siddiqi, Ng, Aida, Zuraida & Abdul, 2008). As such, previous studies may have limited relevance to the Fiji situation which is different from a cultural and service provision perspective.

Knowing and understanding the factors, both service and patient related, associated with rapid psychiatric re-admissions enables mental health service providers to develop appropriate and effective relapse prevention strategies (Jones, 2007 & Callaly, 2010).

It offers an opportunity to improve inpatient and outpatient service provision and to identify those patients who may be at most risk of rapid re-admission to psychiatric facilities.

This is especially important in settings such as Fiji where there has been no previous research conducted in this particular clinical area.

Background

Fiji’s mental health system has been existence since 1884 and started as a single ward to cater for expatriate psychiatric patients. It later included convicted prisoners with mental health problems.

At the time of this study it had been extended to include a 136-bed psychiatric facility (St. Giles Hospital) supported by a well-established public health system. As of July 2, 2011 with the implementation of the new Mental Health Decree 2010, Fiji’s mental health system had been further extended to include psychiatric wards in the three main divisional (general) hospitals across the country with the establishment of psychosocial community rehabilitation centers in each division as well.

Prior to the new Decree, under the previous Mental Treatment Act (MTA) the main mode of admission to the psychiatric hospital was involuntary (Section 15 of the MTA). This mode of admission required two medical certificates from two independent medical practitioners and a reception order signed by the patient’s relative or primary caregiver. Once patients admitted under this section were deemed well enough to go home they were “released on trial” or “ROT”. This meant that should they be re-admitted within one month of being released from hospital the original documents from that previous admission could be used and the “re-admission within ROT” is recorded not as a new admission
but an extension of the initial admission (Mental Treatment Act, 1968).

It was noted anecdotally by St. Giles Hospital staff that the rate of “re-admission within ROT” had been increasing. Intuitively, factors such as lack of social support, poor discharge planning; non-adherence to medication, lack of follow-up post-release have been implicated in these rapid re-admissions. However, there has been no formal research conducted to verify what factors are actually involved in these rapid re-admissions.

Fiji’s Ministry of Health had previously utilized unplanned re-admissions within one month of discharge from general hospitals as an indicator of service quality and the “re-admission within ROT” can be considered the psychiatric service equivalent.

As such, if the factors, both system and patient related, can be clarified, it will enable mental health service providers in Fiji to further improve the mental health care services being provided and improve outcomes for its consumers.

Reducing rapid re-admissions has benefits for both the service providers and patient by reducing costs, improving quality of care and enhancing outcomes.

Aims and Objectives
This study aims to determine the factors associated with readmission within one month of release and to identify potential risk factors associated with these readmission rates which may assist in mental health service planning and provision.

This study also examines patient characteristics (clinical and socio-demographic) and service-related issues in order to determine which factors are associated with readmission to a psychiatric hospital within one month of discharge; and to determine the rate of readmission for those released on trial.

Methodology

Study Design
This is a retrospective descriptive study to review the data extracted from St. Giles Psychiatric Hospital patient folders for patients who have been released on trial (ROT) from January 1-December 31, 2010. Those who have been re-admitted within one month were compared to those not readmitted within the one month period following release comparing the two populations on various patients, clinical and service-provision factors.

Study Area and Population
Data was collected from St. Giles Psychiatric Hospital patient folders of patients who have been released on trial (ROT) from January 1-December 31, 2010 and who were followed up in the greater Suva area during the ROT period.

Ethics approval for this study was obtained from the College Health Research Ethics Review Committee (CHRERC), College of Medicine Nursing Health Sciences, Fiji National University and the Fiji National Health Ethics Review Committee (FNHRERC), Ministry of Health Medical Services, Suva.

Case Definition
Patients who had been involuntarily admitted to St. Giles under section 15 of the Mental Treatment Act (Chapter 113, section 15) and subsequently released on trial (ROT) only once in the same admission were included and only those patients who were followed up in the greater Suva area.

Admission under section 15 requires two medical certificates from two independent registered medical practitioners and a reception order signed by the patient’s relative or primary caregiver. Under this section, once a patient is released on trial (ROT), if they are re-admitted within one month of the ROT date the original documents as above can still be utilized to keep them as an inpatient and the re-admission is considered a continuation of the original admission to hospital.

Data Collection
The St. Giles Hospital weekly review list for January 1-December 31, 2010 was utilized to obtain patients’ folders for those who had been released on trial (ROT). Those patients’ folders were obtained from the records room and the following data was manually collected from them: socio-demographic data (age, gender, ethnicity, marital status, educational attainment, occupational status and religion); clinical and patient factors (date of admission, date of ROT, whether or not admitted within ROT, number of previous admissions, adherence to medications, type and frequency of medication administered, history of substance use, suicidality and aggression and diagnoses); and mental health service-related factors (was there multidisciplinary pre-discharge planning prior to ROT; number and type of relative contact during the admission; frequency of follow-up appointments).

Analysis of Data
All continuous variables were calculated as mean standard deviation or range; categorical variables were computed as a percentage. The statistical significance was evaluated by Student’s t test, Mann-Whitney U-test, Chi square, and Fisher’s exact test. A statistical significance was defined as p value ≤ 0.05. SPSS package (version 22) was used for statistical analysis.

Results
For 2010, there were a total of 490 patients admitted to St. Giles Psychiatric Hospital; 363 of which were readmissions; of the total readmissions, there were 239 patients involuntary readmitted. There were 214 patients not admitted within the release on trial (ROT) period of one month and 25 patients admitted within the ROT period. The involuntary readmission rate for the study period was 48.8%. For those admitted within ROT it took between 4-29 days for readmission, with an average of 16.3 days before readmission.

Significant findings between the two groups are: older age in the group admitted within the ROT period, 44.6 (10.9) vs 39.3(12.4), p=0.040; those not admitted within ROT period were predominantly of Christian faith compared to those in the non-ROT group, 72.2% vs 68.9%, p=0.028; those in the admitted within the ROT period were more likely to have had no formal education compared to those not admitted within ROT (p=0.001); haloperidol decanoate, a depot antipsychotic was used more frequently in the group not admitted within the ROT period compared to those admitted within ROT (p=0.001); and those not admitted within ROT had less frequency of medication given per day (once or twice) compared to those admitted within the ROT period (p=0.002).

There were no significant differences between the groups in terms of length of stay in hospital; number of previous admissions; diagnosis; occupational status; marital status; location of residence; adherence to medication; history of substance use, aggression or suicide. There were also no significant differences between the two groups with regards to mental health service-related factors such as discharge planning; frequency and type of relative contact prior to release and frequency of follow-up appointments.

Discussion
The readmission rate for this study was 48.8% which is comparable to worldwide rates (Mgutshini T, 2010; Silva, Bassani, Palazzo, 2009 & Lin, Chen, Lin, Lee, Ko & LiII, 2010). Those who were admitted within the ROT period were admitted on average within 16.3 days of being released from hospital which is similar to other studies (Guerin, 2010; Chakraborty & Aryiku, 2008).

Of significance in this study, those admitted within ROT were older; were of the Christian faith; had higher frequency of medication prescribed daily; less likely to be prescribed haloperidol depot medication and more likely to have had no formal education. Factors that have been found to be of importance in
rapid readmissions in other studies, such as diagnosis, number of previous admissions, history of violence, suicidality and substance abuse were not found to be of significance in this study. Also, mental health service factors were not of significance between the two groups in this study.

However, due to the limitations of this study the results should be interpreted cautiously. It should be noted that many of the factors being investigated were not available or recorded in the patient folders (up to 68% in some instances) which may result in the significance test not capturing the true picture and the sample size was small. Nevertheless, the current study provides a baseline for further investigation. It is recommended that a further study be conducted for a longer period of time and that data recording in patient folders be improved so that clinical, patient and mental health service factors can be better explored.

References


Jones D. Readmission within thirty days on a psychiatric unit factors influencing readmission and assessing readmission as a valid quality indicator. Calgary: University of Calgary; 2007.


Suicide is a significant public health problem in Fiji. This audit is carried out to determine the burden of suicide and attempted suicide using routinely recorded information from Nadi subdivisional hospital and police station from 2012 to 2014. All patients reported as suicide or dead on arrival due to suicide and patients who were reported as attempted suicide were included in the study. A standardized data collection form was used to gather information on demography, methods used to commit or attempt suicide and the outcome. Data was analyzed using SPSS version 22.

A total of 134 cases of suicide and attempted suicide were reported during the three years study period of which females represented 51%. Majority (76.1%) were attempted suicides and 23% were completed suicides. The mean age among those who completed suicide was 38 years (± 17 years) compared to 28 years (± 11 years) among those who attempted suicide (p<0.005). Hanging, chemical ingestion and drug overdose were the common methods used. The overall incidence of suicide and attempted suicide combined was 51, 56 and 42 per 100,000 populations in 2012, 2013 and 2014, respectively.

Our study findings are consistent with previous studies conducted in Fiji. To better understand the determinists of suicidal behaviors in Nadi and elsewhere in Fiji, context specific qualitative studies are needed to provide the necessary insights to the underlying determinants and specific risk factors by gender, age, ethnic and socio-economic groups.

### Introduction

Suicide is defined as death caused by self-directed injurious behavior with intent to die as a result of behavior. Suicide attempt is a non-fatal self-directed potentially injurious behavior with an interest to die as a result of the behavior which might not result in injury (Center of Disease Control, 2001). Suicide and suicide attempts are growing mental health problems worldwide. According to the World Health Organization (WHO) there were over 800,000 suicide deaths globally in 2012 and suicide was the second leading cause of death among young people aged 15-29 years old. The overall annual incidence of suicide is higher among males however in low- and middle-income countries more women commit suicide compared with high-income countries (WHO & GHO). Of the six WHO regions, the Western Pacific Region reported the highest prevalence of suicide and it has been highlighted that the rate is 19.7/100,000 population as compared to the international rate of 14.1/100,000 population. The youth population of the Pacific Islands has been described as most at risk (De & Milner, 2010). The median age of suicide in Guam, Tonga and Vanuatu were respectively 27, 22 and 21 years compared to 41 years in Australia2. It has also been found that Western Pacific female rate is twice as high as that of western countries.4 Several studies have assessed the trends and determinants of suicide and attempted suicide in Fiji. In 1960-70 suicide rates were highest in the past 12 years. Majority of suicide attempters were females and self-poisoning using chemicals was the predominant method used by the victims (Fiji Bureau of Statistics). Studies and national reports showed higher rates of suicide and attempted suicide among Fijian of Indian descent population, mainly in the Western and Northern divisions of Fiji (Ree, 1971; Pridmore, Lawler, & Couper, 1996). Nadi is the third largest town in Western division with predominant Fijian Indian population. The epidemiology and trends of suicide in Nadi has not been explored in the recent years therefore, we have undertaken this audit to determine the burden of suicide and attempted suicide using routinely recorded information from Nadi subdivisional hospital from 2012 to 2014.

### Methods

**Study site**

Fiji Islands is an archipelago in the South Pacific consisting of over 300 islands. The two main islands are Viti Levu and Vanua Levu. It has a population of 897,271 with approximately 56.8% of these being Indigenous Fijian (iTaukei), 37.5% Fijian of Indian descent and the remaining 5.7% are from other ethnic groups such as Rotuman, European etc.14 The health system in Fiji which is governed by the Ministry of Health and Medical Services (MOHMS) is divided into four geographical locations, the Central, Western, Northern and Eastern divisions. There are three main hospitals, one in each division, three specialist hospitals all based in the Central division (WHO, 2011).

### Results

A total of 134 cases of suicide and attempted suicide were reported during the three years study period of which females represented 51%. Majority (76.1%) were attempted suicides and 23% were completed suicides. The mean age among those who completed suicide was 38 years (± 17 years) compared to 28 years (± 11 years) among those who attempted suicide (p<0.005). Hanging, chemical ingestion and drug overdose were the common methods used. The overall incidence of suicide and attempted suicide combined was 51, 56 and 42 per 100,000 populations in 2012, 2013 and 2014, respectively.

Our study findings are consistent with previous studies conducted in Fiji. To better understand the determinists of suicidal behaviors in Nadi and elsewhere in Fiji, context specific qualitative studies are needed to provide the necessary insights to the underlying determinants and specific risk factors by gender, age, ethnic and socio-economic groups.
In 2014, the Western division had an estimated of 387,710 population. Lautoka hospital is the main divisional hospital and there are five subdivisional hospitals. (Nadi, Sigatoka, Tavua, Ba and Rakiriki)(MOHMS Fiji, 2014). The Nadi subdivision was estimated to have 90,993 populations in its catchment area in 2014 (WHO, 2011). The subdivision has one hospital, Nadi subdivisional hospital (NSDH), three health centers (Namaka, Nadi and Bukuya), six nursing stations (Nawakorau, Nacado, Momi, Nanoko, Nausori Highlands and Naboutini), and two health offices (Nadi Health office and Airport Health office). NSDH is an 85 bed capacity hospital with GOPD, pharmacy, laboratory, X-ray and dental services (Situation analysis).

**Study population and variables**

This retrospective study was conducted in NSDH. All patients who were classified as suicide or dead on arrival due to suicide and patients who sustained bodily injury and reported as attempted suicide were included in the study. Data was collected from admission registers in NSDH and the fatality register at the Nadi police station in April and May 2016. A standardized data collection form was used to gather information on demography (age, sex, ethnicity and religion), methods used to commit or attempt suicide and the outcome (complete or attempted suicide).

**Data analysis**

Data was entered into excel database and analyzed using Statistical Package for the Social Sciences (SPSS) software version 22. A descriptive analysis was used to determine the demographic; characteristic of study participants as well as suicide methods and outcomes. The incidence of suicide and attempted suicide from 2012 to 2014 were calculated using the population statistics provided by Fiji MOHMS (WHO, 2011; MOHMS Fiji, 2013). Results are presented as proportion (percentages), means with standard deviation, incidence rate per 100,000 population as well as in tables and graphs formats. This audit was carried out as part of the training internship program research requirement using secondary data from health facility and it did not require ethical approval.

**Results**

A total of 134 cases of suicide and attempted suicide were reported from NSDH and Nadi police station for the three years period. Females represented 51% of the reported cases. Mean age was 30 years (±13 years) and ranged from 14 to 77 years. Around two third of cases were between the age of 10-29 years old.

**Table 1: Demographic characteristic of study participants**

<table>
<thead>
<tr>
<th>Demographic profile</th>
<th>% (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>50.7 (68)</td>
</tr>
<tr>
<td>Male</td>
<td>66.4 (93)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Fijian of Indian Descent</td>
<td>86.6 (116)</td>
</tr>
<tr>
<td>iTaukei</td>
<td>12.7 (17)</td>
</tr>
<tr>
<td>Other</td>
<td>0.7 (1)</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
</tr>
<tr>
<td>10-19</td>
<td>20.6 (27)</td>
</tr>
<tr>
<td>20-29</td>
<td>40.5 (53)</td>
</tr>
<tr>
<td>30-39</td>
<td>19.1 (25)</td>
</tr>
<tr>
<td>40-49</td>
<td>9.2 (12)</td>
</tr>
<tr>
<td>50-59</td>
<td>6.9 (9)</td>
</tr>
<tr>
<td>≥60</td>
<td>3.8 (5)</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
</tr>
<tr>
<td>Hindu</td>
<td>68.8 (75)</td>
</tr>
<tr>
<td>Islam</td>
<td>16.5 (18)</td>
</tr>
<tr>
<td>Christian</td>
<td>14.7 (16)</td>
</tr>
</tbody>
</table>

With regards to ethnicity 86.6% were Fijian or Indian descent, 12.7% were I-Taukei and 0.7% were people of other ethnic group. Majority of cases (68.8%) identified themselves as Hindu. Muslims and Christian’s represented 16.5% and 14.7%, respectively. The mean age for females was 28 years old slightly lower than for males32 years old, (p= 0.054). In females the highest rate of suicide or attempted suicide was among adolescents (66.7%) while in males it was among 50-59 years old (77.8%).

Out of the 134 reported cases, 23% were completed suicides resulting in death while 76.1% were attempted suicides. Most male committed suicide (62.5) while majority of females (54.9%) were suicide attempters. The mean age among those who completed suicide was 38 years (± 17 years) compared to 28 years (± 11 years) among those who attempted suicide (p<0.005). Both completed and attempted suicide was the highest among people between 20-29 years old. Hanging and chemical ingestion were the common methods of committing suicide, while suicide attempts (or failed suicides) methods were from chemical ingestion and drug overdose.

**Table 2: Characteristic of completed and attempted suicide**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Completed suicide (n=32)</th>
<th>Attempted suicide (n=102)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>F</td>
<td>12 37.5</td>
<td>56 54.9</td>
</tr>
<tr>
<td>M</td>
<td>20 62.5</td>
<td>46 45.1</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fijians of Indian Descent</td>
<td>29 90.6</td>
<td>87 85.3</td>
</tr>
<tr>
<td>iTaukei</td>
<td>3 9.4</td>
<td>14 13.7</td>
</tr>
<tr>
<td>Others</td>
<td>0 -</td>
<td>1 1.0</td>
</tr>
<tr>
<td>Age groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-19</td>
<td>3 10.0</td>
<td>24 23.8</td>
</tr>
<tr>
<td>20-29</td>
<td>9 30.0</td>
<td>44 43.6</td>
</tr>
<tr>
<td>30-39</td>
<td>4 13.3</td>
<td>21 20.8</td>
</tr>
<tr>
<td>40-49</td>
<td>5 16.7</td>
<td>7 6.9</td>
</tr>
<tr>
<td>50-59</td>
<td>6 20.0</td>
<td>3 3.0</td>
</tr>
<tr>
<td>≥60</td>
<td>3 10.0</td>
<td>2 2.0</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>2 18.2</td>
<td>14 14.3</td>
</tr>
<tr>
<td>Hindu</td>
<td>8 72.7</td>
<td>6 6.9</td>
</tr>
<tr>
<td>Islam</td>
<td>1 9.1</td>
<td>17 17.3</td>
</tr>
<tr>
<td>Methods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Ingestion</td>
<td>16 50.0</td>
<td>57 64.8</td>
</tr>
<tr>
<td>Drug overdose</td>
<td>0 -</td>
<td>30 34.1</td>
</tr>
<tr>
<td>Hanging</td>
<td>54 43.8</td>
<td>1 1.1</td>
</tr>
<tr>
<td>Other</td>
<td>2 6.3</td>
<td>0 -</td>
</tr>
</tbody>
</table>
Further analysis of completed suicide by different ethnic groups showed that males are more represented among Fijians of Indian descent (65.5%) and females among iTaukei (66.7%). Regarding the methods of suicide, 100% of the iTaukei people used chemical ingestion while hanging (48.3%) and chemical ingestion (44.8%) were the common means used by Fijians of Indian descent. A slight majority of suicide attempters were females in both ethnic groups, 54% and 57.1% among Fijians of Indian descent and iTaukei, respectively. The most common methods used in attempters were chemical ingestion (Table 3).

### Table 3: Completed and attempted suicides by ethnicity

<table>
<thead>
<tr>
<th>Description</th>
<th>Completed suicide</th>
<th>Attempted suicide*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fijians of Indian Descent (n=29)</td>
<td>iTaukei (n=3)</td>
</tr>
<tr>
<td>Mean age</td>
<td>37 (±17)</td>
<td>49 (±15)</td>
</tr>
<tr>
<td>% (n)</td>
<td>% (n)</td>
<td>% (n)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>34.5 (10)</td>
<td>2 (66.7)</td>
</tr>
<tr>
<td>Male</td>
<td>65.5 (19)</td>
<td>1 (33.3)</td>
</tr>
<tr>
<td>Methods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Ingestion</td>
<td>44.8 (13)</td>
<td>3 (100)</td>
</tr>
<tr>
<td>Hanging</td>
<td>48.3 (14)</td>
<td>0</td>
</tr>
<tr>
<td>Drug overdose</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>6.9 (2)</td>
<td>0</td>
</tr>
</tbody>
</table>

*Excludes one case of attempted suicide among other ethnic group.

In Nadi, the overall incidence of suicide and attempted suicide combined was 51, 56 and 42 per 100,000 populations in 2012, 2013 and 2014, respectively. Completed suicide incidence rate per 100,000 declined from 17 in 2012 to 8 in 2014. The highest incidence of attempted suicide of 45/100,000 population was reported in 2013 which dropped to 34/100,000 population in 2014. Suicide statistics from the Fiji police force was used to calculate the incidence at the national from 2012 to 2014. The highest incidence of completed and attempted suicide was found in 2012, which were 14 and 16, respectively. The incidences of suicide and attempted suicide in Nadi were higher compared with the national rates (Figure 2 and 3).

![Figure 2: Incidence of completed suicide national versus Nadi, 2012 - 2014](image)

**Discussion**

Suicide is a significant public health problem in Fiji. This hospital based audit assessed the trend of suicide and attempted suicide in the third largest town in Fiji’s main island. During the study period there were 134 reported cases of suicide and attempted suicide of these, 86.6% were Fijian of Indian descent and 40% were young people between the ages of 20-29 years. The above findings are consistent with previous studies from Fiji (Ree, 1971; Price & Karim, 1975; Deoki, 1987; Pridmore, Lawler & Couper, 1996; Nafiza,Tuikete, Biaukula, Rokoduru, 2012). Chemical ingestion was the most common method used to commit or attempt suicide. Our study was limited by the lack of detailed information regarding the nature and type of chemicals used, however self-poisoning using N’-dimethyl-4,4’-bipyridinium dichloride, a pesticide widely known by the name paraquat was frequently reported in Fiji both in community and hospital based studies (Pridmore, Lawler & Couper, 1996; Nafiza,Tuikete, Biaukula, Rokoduru, 2012; Morris & Maniam, 2000; Peiris-John, Kafar, Wainiqolo, Reddy, McCaig & Ameratunga, 2013). In this study, suicide was reported in much greater extent.
in males and Fijians of Indian descent. These findings are consistent with previous studies which reported higher rates in the above population subgroups (Price & Karim, 1975; Deoki, 1987; Nazif, 2012). Similarly, studies in other Pacific Island Countries reported higher rate of suicide in males (Booth, 1999). The present findings show that female suicide is also a serious concern, particularly among female adolescents and Fijians of Indian descent ethnic groups. The reason for this has not been investigated in this study, however the finding highlights the greater vulnerability of this population sub-group and the need to further assess specific risk factors and implement appropriate preventative strategies. Suicidal behavior is generally considered to be determined by a range of complex underlying socio-economic, cultural, familial and health determinants including poverty, loss of family members or loved ones, family disputes and expectations, relationship problems, unemployment, psychiatric illness, financial loss etc. In the Pacific, a number of studies have highlighted the greater vulnerability of young people affecting a gradual decline and prevention strategies to rapid and broad social change. Changing family structures, lack of opportunities and widening gaps between community and family expectations and lived experience of young people have been highlighted in a number of contexts (Booth, 1999). To better understand the dynamics of suicidal behaviors in Nadi and elsewhere in Fiji, context specific qualitative studies are needed. Such studies can provide the necessary insights to the underlying determinants and specific risk factors of suicidal behaviors in specific gender, age, ethnic and socio-economic groups given the marked difference in the distribution of suicide and suicide attempts observed. Findings of qualitative studies will be critical to inform appropriate interventions at different levels with a focus on prevention as well as support the development of evidence-informed policies and action plans to sustain and further reduce the incidence of suicide in Fiji. The incidence rate of both suicide and attempted suicide in Nadi are higher than the national rates, which could be explained by predominant Fijian of Indian Decent population in Nadi (up to 70%) compared to 37.5% among the general population. Our findings showed a gradual decline of suicide in Nadi over the past three years which cannot be explained without a broader contextualization and understanding of actual or potential determinants of suicidal behavior over the period and how they may have changed. We may have underestimated the suicide rate because of lack of detailed information as well as the absence of systematically recorded and matching data in both hospital and police station fatality registers. Furthermore, attempted suicide rate might have been underreported as only those people who warranted admission have been included in this study.

Conclusion
These high levels of suicide among youth and the use of chemicals warrants greater attention to what is often considered a neglected issue. Once determinants and risk factors are clearly identified and understood, addressing specific social, cultural, medical and economic factors associated with suicide and attempted suicide in different ethnic, gender and age groups should be part of the national and subnational action plan to prevent suicide and establish accessible mental health and social services to care for those with actual or potential suicidal behaviours. The current national mental health and suicide prevention policy recognize the need for research in mental health (including suicide) as well as quality and integrated data on mental health to scale up service delivery and preventive strategies (National mental health and suicide prevention policy, 2015). Better management of hospital records will ensure that information that is entered is not done so in vain. In NSDH, systemic record of a set of standard variables such demography and detail information on the circumstance of suicide or attempted suicide will enable the use of facility based data for subsequent audits and assist in developing multisectoral suicide prevention action plan action at subdivisional level.

Acknowledgement
The authors would like to thank the record office staff in Nadi hospital, Nadi police station staff and the counselor in Empower Pacific for their assistance and support during data collection.

Conflict of interest
Authors declared no conflict of interest

Funding
None

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Keywords: Suicide, Risk Factors, Suicide Attempts, Completed Suicide

Abstract
Suicide has been described as a major problem in the Republic of Fiji with suicide rates as high as 24.6 per 100,000 for Fijians of Indian Descent (Wainiqolo et al., 2012). The most recent review of literature about suicide in Fiji, performed in 2000, found that Fijians of Indian descent (FOI) had a much higher rate of suicide than I-Taukei. These results were not universal across all studies (Morris & Maniam, 2000). This presumption of increased suicide among FOIs is important to study as it has serious implications for policies and planning. In the present study available published literature from 2000 onward, the date of the last review was collected from equal queries in two medical literature databases and one search engine in addition to hand searching of citations within references. Papers were reviewed for quality and the Newcastle-Ottawa scale applied to determine potential for bias. The Fiji Injury Surveillance in Hospitals and World Health Organization suicide trends in at-risk territories reported more male completed suicides than female suicides and more Fijians of Indian Descent than I-Taukei. Hinging was the most common method used by both males and females. Available studies were insufficient to give valid rates or risk factors for suicide that could be generalized to the population. More work needs to be done to identify risk factors for suicide in Fiji to better target scarce resources.

Introduction
Lord Hardinge, the British Viceroy to India during the indentured period, was sending letters to England in the early 20th Century stating suicide was occurring in “droves” by Indian indentured laborers brought to Fiji (Singh, 2003). However, no verifiable epidemiological data exists from this time period and it remains unclear if these claims were ever substantiated. From 1970 to 2000, a number of studies aimed to answer the question, “Do Fijians of Indian descent (FoI) have one of the highest suicide rates in the world?” These studies generally found an increased rate of suicide in FoI(s), but were limited in scope (Morris & Maniam, 2000). Several studies reported especially high suicide rates in young FOI women, and in those living in rural areas with ready access to toxic agricultural products, but these findings were not consistent across all studies. An additional study found that for 1981-1982 the male suicide rate among the I-Taukei population was 9.2, and among female I-Taukei it was 9.3. Male and female Foo had a rate of 5.2 and 33.1 respectively; an exceptionally high rate among the FoI(s) population (Chang, 2000). Accurate assessment of suicide risk factors and trends are important tools that can be utilized to inform a cohesive public health approach to tackling this problem. Of the emerging patterns that have been identified in earlier studies, being female and living in a rural area appeared to be a risk factor for completed suicide (Morris & Maniam, 2000). This is in sharp contrast to international literature where the primary risk factor for completed suicide is being male (Brockington, 2001; Dervic, Brent, & Quenodo, 2008). It has been longer than a decade since the last literature review and as a low middle income country (LMIC), Fiji is in a position to expand its mental health care and mentor other countries in the region (Deva, 2014). As part of a cohesive public health strategy it is important to better understand whether distinct suicide risk factors are verifiable. If valid, this would have important implications for policies and interventions and allow for more focused use of finite mental healthcare resources. This updated review is an attempt to synthesize available literature from this century to answer the question, “Is there a distinct set of risk factors for suicide in Fiji?”

Methods
A systematic review of English language literature regarding attempted and completed suicide in Fiji was performed. Searches were performed between March and June 2014. Two large medical literature databases, PubMed and PsycINFO, and a search engine, Google, were searched with the following queries: 1. “Hang and Fiji”, 2. “Poison” and Fiji, 3. “Non-acidental drowning and Fiji”, 4. “Fatal hangings and Fiji”, 5. “Fatal poisonings and Fiji”, 6. “Intentional self-harm and Fiji”, 7. “Completed suicides and Fiji”, 8. “Suicide attempts and Fiji”, 9. “Suicide and Fiji”. For Google, only the first 100 hits were further investigated, otherwise all results were further investigated for appropriateness. Given the paucity of literature, searches were not constrained by year published or language. This allowed for papers to be captured that were published too near the publication date of the last review to be included.

All papers found were reported in English. Extensive attempts were made to hand-search references of identified studies to attempt to locate additional, non-indexed studies. This yielded several additional articles. References from each additional paper were further hand searched for additional literature. Included in final analysis are twelve published studies from 2000 to 2014 found using the above methods. Additional articles pertaining to regional suicide statistics were also incorporated as part of this review.

An additional measure was taken to provide uniformity to the assessment of data quality for non-randomized studies. Articles were rated for quality using the Newcastle-Ottawa Scale. (Wells et al., 2000). The scale has previously been used to assess data obtained for studies related risk factors for suicidal behavior, though not in Fiji (Li et al., 2012; Malik et al., 2014). This scale is an internationally recognized scale for evaluating quality in non-randomized studies that evaluates non-randomized studies based on the rigor of group selection, the comparability between studied groups, and the methods used to determine exposure. Each category has several specific evaluation criteria, and each study is evaluated to see if it meets the scale specific metrics for that subcategory. Instead of a composite score, three criteria are independently evaluated and maximum score for each is as follows: selection 4, comparability 2, and exposure 3. Each of the six case control papers was rated individually by two independent raters (AM and GH) and when discordant results arose, a third rater (WLC) evaluated the paper in question. Criteria were discussed until consensus could be reached.

Results
A total of twelve papers were found that met the specified criteria for inclusion in this review. Three of these papers were population studies utilizing either an International World Health Organization Suicidal Trends in At-Risk Territories (WHO/Start) protocol (De Leo & Milner, 2010; De Leo et al., 2013) or utilizing the Fiji Injury Surveillance in Hospitals (FISH) system (Wainiqolo et al., 2013) that records data captured on all deaths and hospital admissions for greater than 12 hours due to acute injury or poisoning (De Leo et al., 2013; Peiris- John et al., 2013). These studies found that among patients that displayed non-fatal suicide attempts via poisoning, females were more likely than males to attempt suicide, and that they appeared to be a young population with one study reporting the highest incidence between 15-29 (Peiris-John et al., 2013) and the other at age 24 (De Leo et al., 2013) for all suicide attempt
methods. The rate for suicide attempt via poison was much higher in the FOI population, with one study reporting a rate of 116.6 per 100,000 population for FOI women and 70 per 100,000 for FOI men vs 11.9 per 100,000 for I-Taukei women and 9.8 per 100,000 for I-Taukei men (Peiris-John et al., 2013). Another study found 41.9 per 100,000 population in FOI vs 8.5 per 100,000 population in I-Taukei for all self-inflicted injury (Wainiqolo et al., 2012). Poisoning and drug overdose were more commonly used in suicide attempts, while hanging and paracetamol poisoning were more commonly used in completed suicides (De Leo et al., 2013).

When suicide completion was examined, there were more male completers than female completers, and the median age was 34. There was still a higher representation among the FOI population, at 24.6 per 100,000 population vs 2.5 in the I-Taukei population (Wainiqolo et al., 2012). Hanging was the most common method for both men and women, with chemicals and pesticides second for men, and fire second for women. These findings are consistent with earlier findings for the years 1971-1972 where male and female I-Taukei had a suicide completion rate of 2.1 and 0.7 respectively, while the male and female FOI rate was 24.9 and 23.1 (Chang, 2000). These three studies report a very significant suicide problem, with a higher rate seen in the FOI population. Taken together, the studies are more consistent with international trends on suicide, namely higher rates of suicide attempts in women, and higher suicide completion rates in men, with younger age being a risk factor (DeLeo 2009, Wainiqolo, 2012).

The nine other studies we reviewed investigated cases of suicide attempts that presented to the various institutions in the country. Statistically significant findings from each study can be found in Table I. Aghanwa produced three sequential papers during the period of review involving suicide attempts brought to Colonial War Memorial Hospital (CWMH) (H. Aghanwa, 2004; H. S. Aghanwa, 2000, 2001). The earliest paper found suicide attempters were of young age, with the mean at 23.79 for females and 24.53 for males (H. S. Aghanwa, 2000). There were only 39 suicide attempters in this study. His final paper was the culmination of the 128 suicide attempters presenting to CWMH service between January 1999 and June 2002. There was a significant difference in age with male attempters being older than female attempters. No other significant demographic variables were found (H. Aghanwa, 2004). When suicide attempts were reviewed from patients that presented to the Family Support and Education Group (FSEG) in Lautoka, the statistically significant finding was that all races reported the primary stress as being social stress. No significant associations between the primary stress (social stress, clinical stress, and other) for the suicide attempt were found with gender, age, education level, or marital status. Suicide risk assessment was not associated with gender, age, religious, ethnicity or marital status (Roberts, Cohen, Khan, & Irava, 2007). Suicide attempters referred to counseling with the Pacific Counseling and Social Services of Fiji were compared to those referred to counseling for reasons other than attempted suicide. Attempted suicide patients were found to be younger at 28.28 vs 36.62 years of age. There was a statistically significant increase in the odds of being male, FOI, defacto or single, and having secondary or tertiary education in the attempted suicide group (Henson, Taylor, Cohen, Waqabaca, & Chand, 2012). Religion was not found to be statistically significant between the suicide attempt group and other counselling group (Henson et al., 2012). Murder-Suicides were assessed in another study, and as it is a rare event, the numbers were quite small: 14 victims and 10 offenders. They found that 9 of 10 offenders and 13 of 14 victims were FOIs. Equal numbers of offenders were male and female (Adinkrah, 2005).

Historical rates of suicide completion were found from two additional studies (Chang, 2000; De Leo, Milner, & Xiangdong, 2009). One additional paper was also found in the review process, but did not provide any original data (Forster, Kuruleka, & Auxier, 2007).

**Table 1: Statistically Significant Data from Included Studies**

<table>
<thead>
<tr>
<th>Paper</th>
<th>Data Timeframe</th>
<th>Population Studied</th>
<th>Significant Data in Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aghanwa, 2000</td>
<td>1/15/1999 - 1/14/2000</td>
<td>Pt’s w/Suicide attempts vs other psychiatric at CWM</td>
<td>Suicide attempters more likely to be never married or students than other referrals</td>
</tr>
<tr>
<td>Chang, 2000</td>
<td>1971-1972, 1981-1982</td>
<td>Suicide Completers in Fiji</td>
<td>Fijians of Indian Descent (FOI) &gt; iTaukei, FOI Male vs FOI Female</td>
</tr>
<tr>
<td>Adinkrah, 2003</td>
<td>1993 - 1996</td>
<td>Homicide-Suicide from the Fiji Police Force records and Local Newspaper</td>
<td>&quot;Offenders &amp; Victims: FOI &gt; iTaukei; Offenders M&gt;F vs Victims F&gt;M. Homicide: Incineration most common, Suicide: Similar rates of Hanging and self immolation&quot;</td>
</tr>
<tr>
<td>Aghanwa, 2004</td>
<td>1/1/1999 - 6/30/2002</td>
<td>Suicide Attempters admitted to CWM &gt; 12 HOURS</td>
<td>&quot;Age, M older than F. F likely domestic duty, M more likely employed outside home. Alcohol Abuse: M&gt;F. Lethal Intent: M&gt;F. F more likely to receive psychological treatment alone&quot;</td>
</tr>
<tr>
<td>Forster, 2007</td>
<td>n/a</td>
<td>n/a</td>
<td>No original data respond</td>
</tr>
<tr>
<td>Roberts, 2007</td>
<td>1/2004 - 2005</td>
<td>Referrals from Lautoka Hospital to Family Support and Education Group after Suicide Attempt</td>
<td>Social stress most common stress among all religions, iTaukei and FOI</td>
</tr>
<tr>
<td>DeLeo, 2009</td>
<td>2004</td>
<td>Suicide data from Fiji Police Crime Statistics Unit, Population data from the Secretariat of the Pacific Community</td>
<td>M&gt;F Suicide completion rate</td>
</tr>
<tr>
<td>Henson, 2012</td>
<td>2010</td>
<td>Pacific Counselling and Social Services of Fiji patients seen after attempted suicide or General Psychiatric Referral</td>
<td>Male gender, FOI ethnicity, and being Single or being divorced were all associated with suicide attempts</td>
</tr>
<tr>
<td>Peiris-John, 2013</td>
<td>10/2005 - 9/2006</td>
<td>FISH Database samples of Non Fatal Suicidal Behaviour</td>
<td>&quot;Most common age at injury for both iTaukei and FOI was 15-29 yrs. Unintentional injury: iTaukei&gt;FOI Intentional Injury: FOI &gt; iTaukei Fiji has a large rate of injury during leisure or play&quot;</td>
</tr>
</tbody>
</table>

DPS: Deliberate Self poisoning, CWM: Colonial War Memorial Hospital, FISH: Fiji Injury Surveillance in Hospitals
Newcastle-Ottawa Rating Scale

None of the six studies we evaluated rated highly on the Newcastle-Ottawa scale. The highest overall score was 5/9. The rest scored 3 or less indicating significant limitations in overall statistical rigor. Most studies performed reasonably well in the determination of exposure criterion. Unfortunately, most studies lacked high quality selection and well defined comparator groups. This introduces the significant potential for bias. Though they do highlight some interesting findings in smaller groups and within some areas of practice, they are harder to generalize making any determination of risk factors less than robust.

Table 2: Newcastle-Ottawa Quality Assessment Scale Rating

<table>
<thead>
<tr>
<th>Paper</th>
<th>Data Timeframe</th>
<th>Selection</th>
<th>Comparability</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aghanwa, 2001</td>
<td>1/1999 -12/2000</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Aghanwa, 2001</td>
<td>1/15/1999 -1/14/2000</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Adinkrah, 2003</td>
<td>1993-1996</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Aghanwa, 2004</td>
<td>1/1/1999 - 6/30/2002</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Roberts, 2007</td>
<td>1/2004 - 2005</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Henson, 2012</td>
<td>2010</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

Discussion

The literature reviewed for this paper is insufficient in scope and overall quality to draw conclusions at present. None of the sampling strategies were sufficiently robust to represent the population, and inferences drawn to the population should be cautioned against. The smaller studies performed in individual hospitals in Fiji did agree with the large population studies on a few demographic predictors. The WHO/Start study found a median age of 24 for nonfatal suicidal behavior, and TRIP-11 found 15-29 the most common age group (De Leo et al., 2013; Peiris-John et al., 2013) suggesting that in Fiji, younger individuals are more at risk for suicide attempts. Aghanwa found an average age of 24.08 and the 16-25 age group most common initially when suicide attempters were compared to other patients on the psychiatry service, and found males averaged 25.15 and females 22.99 (Aghanwa 2000, Aghanwa 2004). FSEG patients saw in Lautoka saw a majority of younger patients, with 32% falling between 10-20 years old and 46% falling between ages 21 and 31 years old. The mean age for females and males was the same at 27, though FOIs were slightly older (27 years old) than I-Taukei (24 years old) (Roberts et al., 2007). Two studies commented on the young age of females attempting suicide (H. Aghanwa, 2004; Peiris-John et al., 2013). Previous studies have hypothesized that social changes within Fiji (including females marrying later, and seeking paid employment opportunities) may have lead to disproportionate social stress on young FOI women as their role in society has undergone more transformation than other social groups, but there is no evidence from the present literature to support that sweeping conclusion (Forster et al., 2007). In addition, the 2007 Census reported the median age in Fiji was 25.1 years, indicating that the bulk of Fijians are younger which can bias the results and suggests this finding should be interpreted with caution (Fiji, 2008). The WHO/Start study found more females were suicide attempters in Fiji than males (De Leo et al., 2013). TRIP-11, when looking at intentional poisoning found that FOI women had the highest rate followed by FOI men. I-Taukei women and men had a lower overall rate in comparison, but the I-Taukei females were still higher than I-Taukei men (Peiris-John et al., 2013). The FSEG patients were 66% female and 34% male (Roberts et al., 2007). Not all studies shared this conclusion. More male patients were found in the suicide attempt group than non-suicide attempt group referred for counseling (Henson et al., 2012). Aghanwa also found that gender was not significant in the suicide attempt group (H. S. Aghanwa, 2000). Adinkrah evaluated characteristics of suicide-homicides and found equal numbers of men and women were offenders, though this is a very rare circumstance leading to a small sample size of limited use to determining larger trends (Adinkrah, 2003). The two large database studies that examined ethnicity found that FOIs had higher rates of attempted suicide and other self inflicted injury. TRIP-10 found the rate for self inflicted injury for FOIs was 24.6 per 100,000 population while I-Taukei were at 2.5 (Wainiqolo et al., 2012). TRIP-11 found that FOIs committed much higher rates of intentional self-poisoning than I-Taukei (Peiris-John et al., 2013). Not all studies reached this conclusion. Aghanwa found no significance between suicide attempters and other psychiatric patients seen (H. S. Aghanwa, 2000) while Henson found that being FOI placed one at higher odds of being in the suicide attempter group (Henson et al., 2012). Adinkrah found that FOIs were more often both the offenders and the victims in Homicide Suicides in Fiji. Patients seen by FSEG were 90% FOI, and 7% I-Taukei (Roberts et al., 2007). Despite anecdotal evidence of religion playing a large role in suicide rates, with Hindu religion generally being viewed as a risk factor and Christian or Muslim faith seen as protective, there is no clear data among the individual hospital studies to lead to a conclusion. When looking at patients referred to Pacific Counseling and Social Services of Fiji, multivariable analysis of the suicide attempter group found that religion was not significant (Henson et al., 2012). One study did report a high percentage of Hindu patients at 60% of the sample, while Christians were 22% and Muslim 17% (Roberts et al., 2007). Patients who were seen at CWMH for attempted suicide were not found to have statistically significant religious differences from general psychiatric patients (H. S. Aghanwa, 2000).

One limitation to this study is that we used two large medical literature databases and Google as the basis for our search, but there...
are other databases that we did not access. Should papers have not been referenced there or in studies we did capture, they did not make it into this review. There were also only a few studies that were completed in the timeframe we searched. Only twelve studies were completed over the past fourteen years on this very important topic. The number was quite small and no robust conclusion can be drawn. There were also not enough high quality studies completed to elucidate any particular risk factors with certainty.

Conclusion
While literature regarding risk factors for suicide attempt and completion is present, it is not currently of adequate quality to base policy or implementation of country specific screening tools. Many potential unique risk factors seem to exist. As Fiji looks to expand its mental health capacities and target interventions at high risk groups, it will be important to further elucidate risk factors through more rigorous epidemiological data. As alluded to in most papers, Fiji has many challenges including accessibility to its more than 200 islands, under-reporting, and mental health care associated stigma which make this difficult to study. However, without such an investment it will be difficult to measure the impact of any such interventions and know how to best ameliorate the ongoing concern about suicide.

References


Establishing a Community Recovery Outreach Program (CROP) in Fiji

I. Tinaimakubuna, S. Devi, T. Nabukavou, N. Karan

Keywords: Community Recovery Outreach Program, Mental Health

CROP stands for the Community Recovery Outreach Program. It is the only established psychosocial rehabilitation program for persons who suffer from any mental illness or have encountered any form of mental health issues.

CROP began as a pilot program in Suva after a joint needs assessment was conducted by the Ministry of Health staff, NGO partners and some Australian volunteer health workers. This joint needs assessment focused on patients who had been discharged from St Giles Hospital (a psychiatric institution) and collected input on how these patients mostly spent their day. Interestingly, the assessment found that most patients spent their day in bed or remained around at home doing very little.

The needs assessment highlighted the need to establish some form of psychosocial rehabilitation program to address recovery and a better quality of living after discharge from hospital by clients with mental health issues. Hence CROP was started as a pilot program in Suva in July 2011.

Initially CROP operated as a day program on 2 days of the week only and members included long-stay patients of St Giles Hospital and some discharged patients. Activities included screen printing, sewing classes, jewelry making, group mental health awareness sessions and going for outings with focus on social and communication skills.

Since then CROP has come a long way and now operates 4 days a week, between 8am to 3.30pm. The other activities include, art therapy, embroidery, gardening, exercise sessions, gym and computer skills. Speakers from various fields are invited to speak on various disciplines, not only creating awareness but also imparting useful information to the life of clients. The facilitators also tried to help clients with employment opportunities and job applications. Other activities that clients enjoyed were regular outings together - learning social and communication skills, and how to use public transport. Recently, family members or carers of clients with mental health issues have started meeting once a month at the center, further strengthening and supporting rehabilitation of clients and understanding of their mental health needs.

Annual evaluations were conducted in 2015 & 2016 on both CROP participants and carers views on CROP as a program. Formal findings are yet to be published but preliminary findings showed that CROP members appreciated the program and majority had found it beneficial in improving their social, occupational and personal life skills. The general view was that CROP had made a positive difference to the clients. Carers were also asked to participate in a separate evaluation of the CROP program later also found the program beneficial for their loved ones and advocated for continuity of the pilot program. The carers saw positive changes in the clients since attending CROP, they felt it was a safe place for clients with mental health issues, not only to learn some life skills and training to improve quality of life but also found it instilled a sense of belonging and identification with the center.

Currently the CROP is facilitated by 2 nursing staff from Ministry of Health and often assisted by volunteers with existing activities and help create new programs which enhance psycho-social rehabilitation and recovery of clients with mental health issues, helping clients to become productive and accepted members of community.

The following is a carer’s perspective on the CROP program and her journey as a volunteer at the center:

“It doesn’t take a herculean effort to be an effective supporter of mental health recovery. I’ve discovered this during my 1month volunteer work with CROP. My role has progressively evolved from one of observation and gentle coaxing to robust verbal interaction and constant encouragement. My skill as a mother and a craftswoman have held me in good stead and paved the way for cooking, cleaning, gardening, drawing, reading and the question and answer sessions and programs the CROP clients participate in. I have found motherhood to be a godly qualification for my role as a CROP volunteer and peer support worker. The virtues of patience and understanding which I had learnt as a mother was all that I needed to help clients with mental health issues.

CROP’s recent relocation to the YMCA premises in downtown Suva has enabled the team to start a vegetable garden, attend gym activities regularly and to savor the ambience of the greenery in the compound. Our male members enjoy watching the many sport teams who train at the ground in front of the YMCA building, gaining encouragement and motivation from them. The fact that the CROP center is now based in a Suva Commercial Business District has helped the team a lot. Clients now find it much easier to travel to and from the center. The location has also enhanced the sense of belonging amongst clients who use the centre, which has been conducive to overall recovery.

Service providers like CROP are essential for educating and creating awareness about mental health issues amongst clients, carers and other allies.

Our current carers are now able to meet regularly at the CROP center to address issues of mutual concern and to learn more about mental illness and disability. Human weaknesses are often tangible reminders that we are mortals with a tendency to err - something care providers tend to overlook. I am now able to detect variations in members’ moods and energy levels when I meet them in the morning and it just gives me a fair idea of how our day would progress. Leaving things to chance is not my style so I always pay attention to detail when organizing myself for the day at CROP.

Often members are optimistic and hope to fulfill goals they had started or had set prior to being diagnosed. This optimism is encouraged because it gives a person a sense of self-worth. Most people are so accustomed to the idea that mental illness always exacts a terrible toll in their lives that they themselves start feeling they are not capable of anything. Not so! There are people in the community who thrive in spite of their mental illness because of proper treatment and support.

I am thankful to the medical, nursing and Australia Pacific Technical College students for their input during their attachments with CROP. A special thank you is extended to the YMCA management and staff for giving us free gym use and Zumba sessions.

Community ownership of CROP is a vital developmental priority in the future as it gives all stakeholders a role and responsibility in aiding these vulnerable individuals in our society. It also helps us raise awareness and promote mental wellness in our communities.”
Introduction

Mental health and psychiatric services in low income countries have suffered from poor funding and prioritisation in the health care plans for decades. At the beginning of the 20th century when colonial governments occupied much of Asia and Africa and the Pacific and invested in then modern health care concepts and hospitals where there were none, mental asylums (then termed Lunatic Asylums) made their appearance, modeled on the lunatic asylums of the colonial mother countries. Thus in India mental asylums in Ranchi, Kilpauk began in the early 1900s as custodial institutions similar to those in Bethlem (Bedlam) in England. Numerous other mental asylums started in Hong Kong, Burma, Indonesia, Malaysia and Singapore to cater for the mentally ill. It must be remembered that the era of custodial mental institutions to contain the severely mentally ill was also an era when no medicines or effective treatments were available. Cells and chains and locks to contain the disturbed became the norm. The abuse of mental patients held in jail like asylums was legendary. Out of sight and out of mind behind high fences and walls mentally ill were feared and stigmatised.

In the Pacific the St Giles Lunatic asylum built on a ridge overlooking the Suva harbour in Fiji was opened in 1884 a year before the opening of the Fiji School of Medicine to cater for colonial and native populations. The St Giles was run by attendants and a few visiting nursing staff from the nearby General Hospital (later to become The Colonial War Memorial Hospital). The first psychiatrist to be appointed to St Giles was in 1965, a good 81 years after it started. One of the first tasks Dr RF Macgregor the medical superintendent undertook was to break down the forbidding high wall that blocked the view of the beautiful Suva harbour. The new wave of reform had begun in mental health of Fiji. Dr Macgregor introduced ECT, and the new psychotropic drugs for use in urban as well as rural areas he visited on horseback, setting up rural psychiatric clinics.

With the advent of psychotropic drugs such as chlorpromazine discovered in 1954 in France for use worldwide for patients with psychoses and later use of new anti-depressants for depressive illnesses the worst of the symptoms of mental illness diminished rapidly. The fear of mental illnesses, the stigmatisation of those with mental illnesses and the need for prison like mental asylums for psychiatric care should have disappeared. But the opposite was the case in most developing countries. Few doctors and nurses trained to work in psychiatry and few had trained psychiatrists until the late 1960. The model of mental asylums of the late 19th century and early 20th century took hold and entrenched itself as the norm for mental health care although the need had diminished with the availability of new and effective medicines.

Thus in the mind of health care systems and the public all mentally ill were psychotic, dangerous and to be feared. Only a mental institution could look after them. Not just in Fiji but throughout the Pacific whose doctors and nurses were largely trained in Fiji School of Medicine and Fiji School of Nursing – and St Giles for the training in mental health care. Although campaigns to reduce the stigma of mental illness are held every year the lack of user friendly alternatives of care in the community or in general hospitals were not introduced - until 2011.

The Fiji Mental health Decree 2010 and training of Diploma level Psychiatrists at FNU

In 2011 after much hard work by staff of the Ministry of Health and St Giles Hospital the new Mental Health Decree came into effect. Under its many articles and sections was a far reaching change in mental health care – that of opening 3 Divisional level Stress management wards in the 3 Divisional Hospitals of Suva, Lautoka and Labasa. Although there was much trepidation by staff as to how the much feared mentally ill were going to be actually managed in general hospitals the law came into force on 1 July 2011 by which time all three units were opened after short training courses for doctors and nurses, and functioning.

Surprisingly the concept was welcomed by the public who filled the beds with their mentally ill kin and sent them to attached follow up clinics now staffed by doctors trained for short periods in psychiatry. The Mental Health Decree however had many other provisions such as setting up a position of National Mental Health advisor, the provision for voluntary patients and new regulations for forensic patients. Many of these were explained to doctors and nurses through the Road Shows on the MH Decree throughout the country.

In tandem with this Decree the Fiji National University started a 1 year diploma course in mental health – the first of its kind in the Pacific. This was started in February 2012 and its first batch of doctors graduated in 2013. This was followed by another 7 trainees including 3 from outside of Fiji – from Vanuatu, Kiribati and Palau. Indeed these were the first ever diploma level psychiatrist for these 3 countries which had managed their mentally ill through ad hoc arrangements with nurse practitioners and the occasional doctor while occasional short training courses by visiting volunteers in mental health. The WHO Suva Office generously helped provide fellowships for the overseas trainees in the Diploma programme in mental health.

Improving care in mental health – from institutional care – to community care

The Paradigm of Institutional and custodial care of the mentally ill that had had a long lasting and deleterious effect on the patients and the public could only be changed by example. Mentally ill in the Pacific need not be chained, handcuffed and transported from outlying islands with police escorts to a mental institution days away by boat for the only treatment that was available. Mentally ill could be treated almost anywhere with available medicines provided nurses and doctors were trained to detect psychoses, depression or anxiety and manage them with adequate doses of appropriate medicines. High walls, barred wire and steel doors and handcuffs could be dispensed if staff learnt the use of appropriate medicines in adequate doses and learnt how to rehabilitate the patient by social psychological and occupational therapies.

These could be done in short stay wards (such as the Stress Management wards) introduced under the mental health Decree. Stress Management Day treatment and rehabilitation centres could add to the recovery process, and availability of more accessible stress management clinics at every small rural hospital would make relapses less of a problem. To this end the Samabula Stress Management Clinic, the CROP rehabilitation centre and a Stress Management Day centre in Labasa were started in 2011 and 2012.

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The Challenges of Shifting the Paradigm

Not all of the changes that occurred over the 2010-2012 to reform mental health in Fiji were achieved without controversy. The biggest resistance to change was the previous method of training which had been based at the 124 year of custodial mental hospital. Security over rode humane patient care and excessive conservatism in diagnoses and treatments led to greater use of locks and restrictions. Non psychiatric colleagues in all the 3 Divisional hospitals resisted the introduction of a psychiatric ward in their general hospitals. Nurses felt that the best training for nurses in psychiatric nursing was in a custodial mental hospital. Psychiatrists were reluctant to take the risk of looking after mentally ill in wards of an unlocked general hospital.

However the biggest surprise was the newly trained diploma level psychiatrists who took up the challenges other shied away from and managed the SMWs very well. Hopefully the 4 trainees from 4 other countries in the Pacific will develop the mental health services in their countries with hundreds of far flung islands using a new paradigm from the custodial one they had seen.

Conclusion

The 130 year old mental institution that is St Giles is undergoing renovation, refurbishing and ward separation to improve acute care and better quality of life for patients and staff. Old habits are hard to change but the paradigm that started in its shift in 1965 appears to be moving forward despite all.

St Giles wall near Bua ward in 1965

Dr R F Macgregor and staff tearing down the wall

Fiji’s first Stress Management Ward 24 May 2011, Labasa Divisional Hospital,
Some Comments on the History of Mental Health Treatments and Implications for Mental Health Services in Fiji

R. Sharkey

Keywords: History of Mental Health treatments, implications, mental health services

Until recently, patterns of nursing organisation and education in Fiji tended to follow those in Britain and Australia. Internationally, mental health nurses have never been autonomous; doctors have generally controlled nurses’ actions. Mental health nurses have struggled over the last 200 years to win recognition of the ideas that many elements of psychiatric care are delivered largely by them. Nolan (1993) believed that mental health nurses’ attempts to separate themselves from medicine have been largely confined to superficial changes in their name.

This nomenclature is important in outlining nurses’ perceptions of the way in which their roles have changed during these 200 years. The literature employs four terms interchangeably: “mental nurse”, “psychiatric nurse”, “nurse therapist” and “mental health nurse”. During the eighteenth and nineteenth centuries “keeper” was used. With the emergence of asylums after 1845 “attendant” was preferred. In Fiji “orderly” is still used to describe the majority of staff in St. Giles Hospital. In Britain from the nineteenth century, female attendants were generally referred to as nurses but men were still known as attendants. The daily routine of attendants could not be classified as nursing. Their role was more like a prison warder’s than a general nurse (Nolan, 1993).

Busfield (1996; Chatterton, 2000) asserted: “Despite the initial optimism on which they were founded, by the second half of the nineteenth century the public asylums were like the workhouses, increasingly functioning as places of last resort providing custody rather than care and treatment”. By the 1860s it was clear that chronicity, as a dimension of insanity, was the single most important issue politically, professionally, and financially (Smoyak, 2000). Attendants shared a common background with patients, so there was a cultural empathy between them, while doctors kept the barriers of ‘science’ and ‘objectivity’ solidly between themselves and their patients (Nolan, 1993). In addition to being low in status, working with the mentally ill was also characterised by low pay, long hours and poor working conditions. Mental health nurses did not have any formal training until the 1890s whereas general nurse training had begun in the mid-nineteenth century (Chatterton, 2000). The first qualified nurse was appointed to St. Giles Hospital in 1970.

Between 1903 and 1933 the number of patients confined in psychiatric institutions in the USA more than doubled from 143,000 to 366,000 (Shorter, 1997). Growth was similar in other western countries. Shorter (1997) believed that as mental hospitals grew in size, they fell in therapeutic power. Many of the patients in these institutions were suffering from tertiary syphilis. There were no antibiotics to treat syphilis in its primary stage before World War II, so individuals who reached the third stage suffered severe damage to the central nervous system. Their behaviour was often bizarre and hard to manage. Other chronic conditions with an organic aetiology included Huntington’s Chorea, pellagra, brain tumours and cerebral arteriosclerosis. In 1917 Wagner-Jauregg found that tertiary syphilis could be cured with malaria. By 1944 in the USA penicillin was completely curing syphilis (Shorter, 1997). This accelerated the search for physical cures for the psychoses.

Attempts to cure mental illness through physical treatments have been made for centuries. Laxatives were used into the twentieth century. The nineteenth century’s second half was the alkaloid period in which drugs such as hyoscyamus were used. During this period there was no pretence that this was anything other than the momentary relief of symptoms with drugs (Shorter, 1997). From 1869 Choral Hydrate became popular because it was reliable in strength and did not need to be injected. Apomorphine was used against mania. Macleod in 1897 used sodium bromide as the first ‘sleeping cure’. Then bromides were used widely within public asylums because they were cheaper than Chloral. From 1904 barbiturates began to be used instead. From 1915 ‘deep sleep therapy’ began. In 1933 Sakel reported that patients withdrawing from morphine addiction by the use of insulin coma became ‘tranquil’ and ‘accessible’. By 1939 most hospitals had insulin units. Insulin coma therapy was a dangerous procedure with a mortality of almost one in a 100, and required a team of doctors and nurses in a special unit. In the long term, it was discovered that insulin coma and barbiturate-sleep therapy had about the same success rate, a substantial improvement on nothing (Shorter, 1997).

Another therapy, Metazol (cardiazol) (a drug similar to camphor) produced convulsions with coma. Cardiazol was never a big success because it was too unreliable in producing fits and was feared by patients. In 1938 Cerletti used electricity to produce convulsions. Electro-convulsive therapy (ECT) was not a cure for schizophrenia but it represented a great alleviation of the disabling symptoms of psychotic illness, and permitted individuals to function more normally. By 1959 ECT became the treatment of choice for manic-depressive illness and major depression (Shorter, 1997). ECT and insulin coma therapy were used in Fiji by 1947 (Roberts, Leckie & Chang, in press). Shorter (1997) reported that the great wave of physical therapies of the 1930s included one unsuccessful example of psychosurgery, lobotomy.

Shorter (1997) reported that in the first half of the twentieth century, psychiatry was caught in a dilemma. On the one hand psychiatrists could warehouse their patients in vast asylums in the hopes that they might recover spontaneously. On the other hand they had psychoanalysis, a therapy suitable for the needs of wealthy people desiring self-insight, but not for real mental illnesses. Psychoanalysis, of course, by-passed Fiji and other poor, non-European countries. In the long run, it didn’t matter because, by the 21st century it had been largely discredited as an evidence-based therapy.

While the energies and resources of the USA for the most part were occupied by war during the 1940s, several major somatic therapies were introduced into the state hospital system, most having their origins in Europe. Fever therapy, pentylenetetrazol (Metrazol), insulin, electric shock therapy and lobotomies were used in almost all of the larger hospitals. Hospital records showed no comparisons of expenses or justification for their continued use by any scientific evaluative method. Throughout the first 60 or so years of the twentieth century, state hospitals became huge infirmaries, housing increased numbers of elderly individuals with no acute psychosis; concern was expressed about the cost of such care. Hospitals were dramatically understaffed, and treatments were given with little consideration of documentation or after-care.

In 1926 Loewi had discovered that the neurotransmitter acetylcholine mediated transmission from one nerve to the next. In the 1930s, psychiatrists began to use acetylcholine with schizophrenic patients. In the search for successful drugs they used caffeine, sulphur suspended in oil, typhoid antitoxin and turpentine (Shorter, 1997). The discovery of LSD in 1943 had touched off another round of efforts to use drugs for sorting out psychological processes (Shorter, 1997). Therapeutic
communities and day hospitals began to be used widely in Britain and Europe after World War II. By the end of World War II large-scale twin studies had made it apparent that schizophrenia and bipolar disorder were heavily genetic in nature (Shorter, 1997, p.244). This was another impetus for researchers, especially pharmaceutical companies to search for effective drugs for schizophrenia. This search continues today.

Caring for the large numbers of long-term patients for whom there was no cure produced a very depressing effect on big, public mental hospitals. Attendants and other staff worked in a generally depressed environment, with few positive outcomes in the patients for whom they were responsible. Poor pay and a demoralising work environment produced serious negative behaviors on the part of some staff, who became abusive, mentally and physically, of their patients. Conflict and disorganisation were common (Smoyak, 2000).

In 1951 Laborit discovered the tranquillisizing effect of chlorpromazine. Delir and Deniker began administering it in Paris with psychotic patients. Chlorpromazine spread through the French system. “By May 1953 the atmosphere in the disturbed wards of mental hospitals in Paris was transformed: straitjackets, psychohydraulic packs and noise were things of the past” (Shorter, 1997). Chlorpromazine initiated a revolution in psychiatry, comparable to the introduction of penicillin in general medicine. While it did not cure the diseases causing psychosis, it did abolish their main symptoms so that patients with underlying schizophrenia could lead relatively normal lives and not be confined to institutions (Shorter, 1997). However, by 1953 it was also obvious that chlorpromazine had many extra-pyramidal side effects.

After that many antipsychotic, anomician and antidepressant drugs poured forth from pharmaceutical companies. In 1949 Cade had discovered the antomician properties of lithium for manic-depressive psychoses, but it was not accepted into wide use until the 1970s because it was a plentiful natural substance with no profit motivation for the big drug companies (Shorter, 1997). In 1955 imipramine was shown to have dramatic antidepressant effects. Rival drugs such as amitriptyline flooded the market (Shorter, 1997). For the most part, the new psychopharmacology was driven by the drug industry. The drug industry funded research because only advances in basic science would permit the design of drugs specifically tailored to block whatever biochemical or anatomical pathways were causing psychotic illness. In the 1960s and after, psychopharmacology became big business in the USA and Britain, the two countries where it most flourished (Shorter, 1997).

During the 1950s, other developments served to shape the structure, politics and funding patterns of mental health care. Psychotropic drugs and milieu therapy were introduced almost simultaneously and were described as entities that definitely would prepare hospitalised patients for discharge into the community. ECT and psychosurgery were still prevalent. ECT and not be confined to institutions (Shorter, 1997). However, by 1953 it was also obvious that chlorpromazine had many extra-pyramidal side effects.

One move to close asylums had begun before the rise of the anti psychiatric movement. In the western world, what initiated the massive discharge of psychiatric patients to the community, a process known as deinstitutionalisation, was the introduction of antipsychotic drugs in 1954. What kept deinstitutionalisation going were the combined pressure of the anti psychiatric movement outside of medicine and the ideology of community psychiatry within medicine (Shorter, 1997). Pressure for deinstitutionalisation is still not intense in 15. The movement here is driven by World Health Organization (WHO) philosophy and community mental health. There is little evidence still of any anti psychiatric movement. Instead pressure is beginning to be exerted by a consumer ‘recovery’ movement which is largely mounted by practitioners from outside Fiji.

Smoyak (2000) suggested that in the USA community mental health centres were not serving the patients leaving the state hospitals but rather were developing a population base that was not seriously mentally ill. Very few centres did any type of outreach or considered helping individuals with diagnoses such as schizophrenia to be their main mission. Devane et al (1998) believed that similar events occurred in Britain. Smoyak (2000) stated that the discharge of patients from the hospitals was called ‘deinstitutionalisation’, but believes that it should be more accurately ‘transinstitutionalisation’ because younger patients often found themselves in gaols and older patients in nursing homes. It remains to be seen if Fiji can escape a period of ‘transinstitutionalisation’ as services are deinstitutionalized, will clients with mental illness find suitable places to live, or will they end up in gaols and nursing homes, as happened in the west?

In the 1980s nursing curricula began to change from regarding general and mental health nursing as being essentially different, to recognizing the nursing process as a suitable framework for the practice of both general and mental health nursing. Such a framework was instituted in many countries including the USA, Great Britain, Australia and Fiji. Nolan (1993) predicted that this might hasten the demise of the mental health nurse because the individual contribution of such a health specialist would become subsumed into the profile of the general nurse. He believed that general nurses are seen as far preferable to
mental health nurses whose work requires time and the effects of which are not easily assessed. The profession of Medicine had always regarded psychiatry as a post-graduate speciality. Nolan’s beliefs are supported in Fiji and other countries where mental health services have difficulty in recruiting new graduates from the universities and convincing them to engage in post-graduate studies.

In some ways Fiji has retained its centralised mental health services while observing what is going on in the rest of the world. In much of the developed world it is claimed (e.g. Gournay, 1995) that community mental health services have chosen to work with more attractive, easier-to-work-with clients with problems like anxiety and depression rather than those with the severe psychosis. Gournay (1995) argued that there has been a refocus on serious and enduring mental illness in Britain since the early 1990s because of: public dismay at the sight of vulnerably mentally ill people on the streets; development of effective interventions in schizophrenia; loss of credibility of the anti-psychiatric schools; and success of various model services which have provided community treatments. Deinstitutionalisation became a shame in the USA. A third of the homeless were mentally ill, unable to organise their lives and find shelter or work. Other discharged patients drifted into the criminal justice system, one study finding that 14% of gaol inmates had had previous psychiatric treatment (Shorter, 1997). The community structures that were supposed to receive them turned out to be nursing homes and boarding houses. Consider the situation in Fiji. More and more citizens leave the rural communities to seek work and sustenance in the towns and cities. More and more clients discharged from mental hospitals find that they are not welcome or are not able to return to rural villages and communities. Since there are few nursing homes or other residential options, many discharged patients end up homeless.

Antipsychotic medications that in hospital had provided some effective relief are often not taken once patients are on the streets because of the troublesome side effects that caused facial twitches and other involuntary movements (Shorter, 1997). The situation is worse in less wealthy countries because the formulary available to prescribing doctors is much more limited. While there is little evidence that newer drugs are more effective than the original chlorpromazine for psychosis, and amitriptyline for depression, evidence that newer drugs are more effective than the original is worse in less wealthy countries because the formulary available to prescribing doctors is much more limited. While there is little evidence that newer drugs are more effective than the original chlorpromazine for psychosis, and amitriptyline for depression, the earlier (now cheap) drugs have many more side effects.

It is stated in Fiji’s Mental Health Decree (2010) that “In interpreting and implementing the provisions of this Decree, due regard must be given as far as practical and subject to available resources – to the principles approved by the World Health Organization (‘WHO’) in relation to mental health;” (Section 4(1)(a).

In line with this principle, Fiji is following guidelines suggested in the WHO’s Mental Health Action Plan 2013-2020. Objective 2 of the plan is “to provide comprehensive, integrated and responsive mental health and social care services in community-based settings”; in other words to deinstitutionalize mental health services. It is necessary, then, for Fiji to move towards community-based services, with the advantage of seeing results in the rest of the world during the past 50 years, and with the disadvantage of the limited resources of a middle-income nation. It is to be hoped that Fiji can avoid many of the mistakes made in other parts of the world, in its intentions to offer comprehensive mental health services to people in all parts of the country.

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Working Together for Suicide Prevention in Fiji

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Keywords: Suicide, Suicide Prevention

Every suicide is a tragedy. The impact on families, friends and communities is devastating and far reaching, even long after loved ones have taken their lives.

Across the world suicide is often less prioritised than other public health issues, this has also been the case in Fiji. There is no single actor sufficient enough to explain why a person may think or complete suicide, rather a combination of several interacting factors, personal, social, psychosocial, cultural and our biological environment. In light of the complex nature of suicide and its effects on the community and society, it is an issue for all Fijians to address.

If we are to begin a successful journey to the prevention of suicide in our country we must acknowledge suicide is everyone’s business. The Ministry of Health should not solely carry the weight of suicide prevention as it has multiple influences and impacts from other sectors and the community as a whole. A successful strategy would be to develop a multi-sectoral approach that addresses suicide in a comprehensive manner.

It is important that our government stands up and demonstrates its leadership. The government is in a position to develop and strengthen collaboration between stakeholders who historically have not worked in partnership. Pressure from the Government for this to occur would assist in developing consistent, evidence-based community awareness messages and provide an opportunity for accurate baseline data to be established.

The Establishment of accurate National data and statistics in relation to suicide and Mental Health in Fiji is essential. Comprehensive data would enable targeted interventions to be established, backed by effective monitoring of programs and initiatives. In addition the availability of such data could assist in setting research priorities in the future and in the development of risk assessment protocols and interventions specific to Fiji.

In addition to multi-sectoral government and non-government partnerships, we as individuals have the ability to be part of the solution. Despite an increase in research and knowledge about suicide and its prevention, in Fiji the taboo and stigma surrounding suicide persist and often people do not seek help or are left alone. We can all play a part in reducing statistics in Fiji by simply being more aware, more supportive and knowing where to find more expert help.

Let’s not join in the mockery or bullying of unfortunate people. Let’s say that it is time that we treat people better than we do now. Let’s not be scared to promote awareness about mental health and suicide. Every school should be talking about mental health and suicide prevention. Every workplace should have plans to help people who are struggling with emotional or other health problems. Every church should be talking about mental health and suicide prevention. We can listen to each other. We can communicate properly. We can try to understand the worries of our children, parents, family member, and workmate. Not everyone can be a counsellor but everyone can be a helper. We are all capable of lending an ear and offering support if we try. As most of us know that there are many wonderful things in the world and many reasons to stay alive.

Every single life lost to suicide is one too many. The way forward is to act together, and the time to act is now. I call upon all Fijians to make suicide prevention an imperative.
Assessment and Management of Elderly with Depression in Primary Care Setting

Balram Pandit

Keywords: Elderly, Depression, Primary Care

Abstract:
Mental health and emotional well-being are as important in older age as at any other time of life. With advancing time the elderly population is increasing and hence a surge in elderly with psychiatric condition is inevitable. If it is expected that a specialist cares for every psychiatric condition, in a resource poor country like Fiji, is likely to result in a huge gap between services and consumer.

Depression is the most common mental illness in our elderly but in the majority of the cases they can be managed in a primary care setting. There is ample evidence in favour of the effectiveness of brief interventions, delivered for managing mild to moderate depression by a primary care team. The purpose of this paper is to discuss both assessment and management techniques that can be applied in primary-care setting for older adults seeking mental health services.

Introduction
Globally, the population is ageing rapidly. Between 2000 and 2050, the proportion of the world’s older adults is estimated to double from about 11% to 22%. In absolute terms, this is an expected increase from 605 million to 2 billion people over the age of 60. Older people face special physical and mental health challenges which need to be recognised (WHO).

Depression is the most common mental illness in the elderly (Wiese, 2011). The World Health Organization estimated that the overall prevalence rate of depressive disorders among the elderly generally varies between 10 and 20%, depending on cultural situations (Barua, Ghosh, Kar & Basilio, 2010). Unfortunately no local population based study could be found but Fijian data are likely to be on higher side as:
- Majority of the studies presenting this data are from the western world where the accepted chronological age for definition of elderly is 65 years unlike the accepted age in the developing world like Fiji and also (WHO) the UN agreed cutoff is 60.
- There is cultural hesitancy in acceptance of any mental disorder.
- There is apparently high cultural tendency to see their symptoms as part of normal aging process.
- Being a resource poor country there is increased chance of under-identification of illness by health-care professionals and older people themselves.
- There is strong stigma surrounding depression and mental illness.

The community-based mental health studies in a developing country like India have revealed that the point prevalence of depressive disorders in elderly Indian population varies between 13% and 25% (Barua, Ghosh, Kar & Basilio, 2010). Depression associated morbidity in terms of decline in function leading to dependence on support system (family and social) and mortality (suicide) are high in elderly compared to younger adult populations. Effectively lethal self-harm behaviors increase with age (Heisel et al., 2006).

Fortunately, depression in late life is treatable (Charney et al., 2003) and most older adults respond well to antidepressant medication and to psychotherapy (Whyte et al., 2004). Nonetheless, it is essential first to identify and diagnose depression, which can be challenging in this population owing to various factors, e.g. communication difficulties, comorbidities, stigma.

What makes the elderly a special population?
- Differences in clinical presentation from younger adults
- Cognitive-affective symptoms of depression, including dysphoria and worthlessness/guilt, than are the latter. Sleep disturbance, fatigue, psychomotor retardation, lack of interest in living, and hopelessness about the future may be more prevalent in late-life depression than in depression in younger or middle-aged adults.
- Subjective complaints of poor memory and concentration are also common among depressed older adults. Slower cognitive processing speed and executive dysfunction are frequent findings from objective testing. With respect to somatic symptoms, depressed older women report more appetite disturbance than men, whereas older men report more agitation. Several geriatric-specific variants of depression have been proposed. One variant, reflecting the predominant age differences in presentation, has been called “depression without sadness” or “deletion syndrome”. Another variant is the “depression-executive dysfunction syndrome”. As the name indicates, cognitive performance in this syndrome is typically impaired on measures of verbal fluency, naming, and initiation/perseveration. The syndrome also includes psychomotor retardation and anhedonia but less severe vegetative symptoms, agitation, and guilt than other types of depression (Fiske, Wetherell & Gatz, 2009).
- Many commonly used rating scales for younger adults can miss depression in the elderly
- The pharmacokinetics and pharmacodynamics of most drugs are altered to an important extent in the elderly. These changes in drug handling and action must be taken into account if treatment is to be effective and adverse effects minimised.
- The elderly often have a number of concurrent illnesses and may require treatment with several drugs. This leads to a greater chance of problems arising because of drug interactions and to a higher rate of drug-induced problems in general.

Assessment
The assessment of depression in older primary-care patients is done in three phases: detection, evaluation, and symptom monitoring. For detecting an elderly with depression even a clinically high level of suspicion based on awareness of risk factors is required, followed by a suitable screening tool. Common risk factors include:
- Predisposing risk factors: Female gender, widowed or divorced status, previous depression, brain changes due to vascular problems, major physical and chronic disabling illnesses, polypharmacy, excessive alcohol use, social disadvantage and low social support, caregiving responsibilities for person with a major disease (e.g., dementia) personality type.
- Precipitating risk factors: Recent bereavement, move from home to another place (e.g., nursing home), adverse life events (e.g., loss, separation, financial crisis), chronic stress caused by declining health, family, or marital problems, social isolation, persistent sleep difficulties.

Screening should also be considered in cases with history of bereavement, social isolation, persistent complaints of memory difficulties, chronic disabling illness, recent major physical,
persistent sleep difficulties, significant somatic concerns or recent onset of anxiety, refusal to eat or neglect of personal care, recurrent or prolonged hospitalisation, diagnosis of dementia, Parkinson Disease, or stroke, and recent placement in a nursing home or other long-term care facility (Toronto, 2006).

Selecting Screening tool: Selection of detection tool for use with elderly primary care patients is highly affected by response format (true-or-false versus Likert scale), length of the tool and how the majority of older primary-care patients report their depression. Studies have found that older primary-care patients experience depression more physically (Lapid & Rummans, 2003); they are less likely to endorse affective symptoms of depression such as sadness or depression and are more likely to endorse symptoms such as fatigue, sleep disturbance, and anhedonia (Norris, Arnau, Bramson & Meagher, 2003); they also have less severe symptom scores on depression scales. Furthermore, older primary-care patients tend to report far more disability (Yates et al., 2004). All these factors pose diagnostic difficulties and to overcome it researchers have suggested exclusive and inclusive approaches in assessment, each having its own merits and demerits.

One study (Area & Ayalon, 2005) reviewed some commonly used relevant tools and recommended that in selecting the best tool for detecting depression in older primary-care patients, one must balance psychometric quality, ease of administration, and clinic characteristics. Based on the first two criteria, and until future research is done to directly compare instruments in older primary care patients, it appears that the PHQ–9 (Patient Health Questionnaire) and the CES–D–R (Center for Epidemiological Studies–Depression Revised, 10 item) scale may be the most appropriate choices of detection tools, followed by the GDS–15 (Geriatric Depression Scale), the BDI–PC (Beck Depression Inventory for Primary Care), and the GHQ–12 (General Health Questionnaire–12). The rationale for this order was based mainly on the ease of administration, the degree to which tools can be applied uniformly across age groups, and the overall effectiveness in detecting depression.

For evaluating depression, diagnosis should be made as per criteria laid down in ICD-10 (WHO, 1992) or DSM-V (American Psychiatric Association, 2013). This is followed by the following series of steps:

- Severity estimation, including presence of psychotic or catatonic symptoms.
- Suicide risk assessment.
- Review of psychiatric and medical comorbidities.
- Assessment of current medications, allergies and substance use.
- History (personal and family) of psychiatric disorder (esp. mood disorder)
- Review of family condition, support system, current stressors, life situation and personal strength.
- Appraisal of functioning.
- Comprehensive mental status examination including cognitive function. (Saint Louis University Mental Status (SLUMS) exam is considered more sensitive in detecting mild cognitive impairment than Mini Mental Status exam in elderly persons (Pullam et al., 2012)).
- Full physical examination and relevant investigations to identify or exclude any medical problem that could possibly contribute/mimic depressive symptoms.
- Assessment of any collateral information if available.

Any of the screening tools discussed above can be used as symptom-monitoring tools to assist the assessor in determining if the patient is responding to treatment. Only the PHQ–9 has been evaluated for its sensitivity for change over time in primary-care elderly persons. Measures used for symptom monitoring should be brief and consistent across the time so as to allow score comparison over time. Monitoring should be done at each follow-up visit. Symptom monitoring in this way results in greater quality of depression care in primary care (Rollman, 2003).

**Figure 1: Flow chart for assessment of depression**

- Suspect Depression if:
  - Risk factors
  - Depressive Symptoms
  - Cognitive and functional impairment

- Screen using a tool

- Comprehensive evaluation:
  - Diagnosis using diagnostic criteria by ICD/DSM
  - Severity assessment using scale
  - Suicide Risk assessment
  - Full Hx, MSE and physical examination
  - Basic plus relevant other investigation

- Simple/Uncomplicated

- Treatment

- Follow-up assessment

- Referral to Specialist mental health services

- Suicidal
- Psychosis
- Complicated due to medical or psychiatric
Management

Older people respond well to treatments for depression. The management of depression in older people essentially follows the same step-wise pathway as in younger adults and chronological age should not be a barrier to specific therapies. There is evidence to support the use of the same range of psychological therapies as in younger adults. If pharmacological management is required, an SSRI remains first -line antidepressant (NICE, 2007) in elderly as well.

General Principles of Pharmacotherapy in Elderly with Depression:

Use drugs only when absolutely necessary (e.g. failure of non-pharmacotherapy). There is more evidence for the effectiveness of antidepressant medication in moderate to severe depression than in milder depression (NICE, 2007). Selection of an antidepressant is guided by previous response to treatment, side effect profile of that antidepressant, the type of depression, patient’s other medications, the patient’s other medical problems, and the potential risk of overdose (Toronto, 2006). A suitable mood stabilizer with antidepressant often helps in preventing “switch” in bipolar depression and an appropriate antipsychotic will be required in majority of cases of depression with psychotic symptoms. Antidepressants are effective in treating depression even in the face of medical illnesses. Yet caution is advised as antidepressant therapy may worsen the medical condition or cause adverse events in some cases (Alexopoulos et al., 1988). “Start low and go slow” has been an old principle of psychopharmacotherapy in elderly people to avoid increased side effects. However, recent evidence suggests that such slow dose escalation may not be necessary in all the cases. Besides they should not be undertreated. Avoid, if possible, drugs that block α-1 adrenoceptors, have anticholinergic side-effects, are very sedative, have a long half-life or are potent inhibitors of hepatic metabolising enzymes. Such drugs can cause postural hypotension and cardiac conduction abnormalities. Tricyclic antidepressants are lethal in overdose and are avoided for this reason. Try not to treat the side-effects of one drug with another drug (Maudsley, 2012). Instead find a better tolerated alternative. It is also important to minimize drug-drug interactions, especially given the number of medications elderly patients are often taking. Keep therapy simple—that is, once daily administration whenever possible.

Choosing an Antidepressant in Elderly People:

Today medical science offers a bigger basket of antidepressants and auspiciously there are several antidepressants that have been shown to be efficacious in elderly patients being treated for a major depressive episode without psychotic features. In choosing an antidepressant it is recommended that selection be based on the best side effect profile and other qualities as discussed above. The selective serotonin reuptake inhibitors (SSRIs), selective norepinephrine reuptake inhibitors (SNRI; e.g. venlafaxine and Desvenlafaxine) Norepinephrine-Dopamine reuptake inhibitor (NDRI; e.g. bupropion ) and Noradrenergic and specific Serotonergic antidepressant (NaSSA; e.g. Mirtazapine) have all been found relatively safe in elderly and hence generally used as first line antidepressants. They have comparatively lower anticholinergic effects that tricyclic antidepressants (TCAs) and hence are relatively well tolerated by patients with a cardiovascular problem. Common side effects of SSRIs include nausea, dry mouth, insomnia, somnolence, agitation, diarrhea, excessive sweating, and, less commonly, sexual dysfunction. SSRIs associated hypotension and gastrointestinal bleeding are other important side effects. SSRIs considered to have the best safety profile in the elderly are escitalopram, citalopram and sertraline (Baldwin et al., 2002).

Fluoxetine is usually not recommended for use in the elderly because of its long half-life and prolonged side effects. But in a country like Fiji it may find a suitable place when used judiciously because of its unique ability to reduce weight, HbA1c (glycosylated Hb) and TG (triglyceride)(Ye et al., 2011). Fluoxetine and Citalopram can effectively reduce the severity of depression in diabetic patients without an adverse effect on glycemic control (Khazaie, Rahimi, Tatari, Rezaei, Najafi & Tahmasian, 2011). Paroxetine is also typically not recommended for use in the elderly as it has the greatest anticholinergic effect of all the SSRIs. TCAs are considered second line antidepressants due to their side effects. If a tricyclic is chosen as a second-line medication, then nortriptyline and desipramine are the best choices given that they are less anticholinergic (Baldwin et al., 2002). Also, it is recommended that an ECG and postural blood pressure reading be obtained before starting a patient on a tricyclic antidepressant and after increasing the dose (Toronto, 2006).

Dosing: How to Start?

The starting dose of an individually tailored antidepressant for elderly should be half that of the younger adult (Toronto, 2006). After starting at such a low dose proceed slowly but if the patient is tolerating well then the goal should be to increase the dose regularly at 1- to 2-week intervals in order to reach an average therapeutic dose more quickly (Roose et al., 2004). Canadian Coalition for Seniors’ Mental Health (CCSMH) guidelines suggest that therapeutic dosing be reached within a month (Toronto, 2006).

How to maintain?

Beneficial effects may take two to three weeks to begin and continue from then. If there is no significant improvement after two to four weeks an average therapeutic dose, further increases should be made until there is either a clinical improvement, intolerable side effects, or the maximum suggested dose is reached. An adequate trial of any one medication is a minimum four to six weeks at the maximum tolerated dose. If there is no improvement in depressive symptoms after four weeks or insufficient improvement in symptoms after eight weeks on the maximum recommended or tolerated dose of an antidepressant, then the antidepressant should be changed. There can be loss of clinical improvement as the patient is weaned off the agent and started on another. Cross titration can be done with caution concerning drug-drug interactions. If there is significant improvement but not full remission after four weeks on the optimized antidepressant, the recommendation is to wait another four weeks and then consider add-on treatment. Once remission has occurred, the same dose should be maintained.

How long to maintain?

An untreated depressive episode lasts six to 13 months; most treated episodes last about three months. The withdrawal of antidepressants before three months has elapsed almost always results in the return of the symptoms (Kaplan & Sadock, 2007). A general guideline in younger adult is to maintain antidepressant treatment for at least six months or the length of a previous episode, whichever is greater. Thus six to 12 months (Wiese, 2011; Kaplan & Sadock, 2007; Shelton, 2001) seems a reasonable period of treatment after full recovery from a first episode. An Australian consensus guideline (NSW Health, 2001), developed for elderly, supports 12 months treatment in this context. Continuation beyond this should be discussed with a psychiatrist.

How to stop?

Discontinuing antidepressant medications can precipitate a variety of somatic and psychological reactions in patients. These reactions, often termed antidepressant withdrawal or discontinuation syndrome, generally comprise anxiety, insomnia, and flu-like symptoms; they been noted with all classes of antidepressants including TCAs, MAOIs, SSRIs, and SNRIs (Kaplan & Sadock, 2007) but can be prevented with gradual tapering. In general, a seven to 10-day tapering period is recommended for all antidepressants (Wiese, 2011 ). A list of commonly used antidepressants in the elderly with their respective doses is shown in the following table.
Table 1: Commonly used Antidepressants in Elderly People

<table>
<thead>
<tr>
<th>Name</th>
<th>Starting dose (mg/dry)</th>
<th>Average dose (mg)</th>
<th>Maximum dose</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSRI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nortriptyline</td>
<td>10-25</td>
<td>40-100</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Bupropion</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>Good in smokers, divide higher doses, chances over seizure esp. above 300mg</td>
</tr>
<tr>
<td>Venlafaxine</td>
<td>37.5</td>
<td>75-225</td>
<td>375</td>
<td>May increase BP, avoid cardiac pts.</td>
</tr>
<tr>
<td>Desipramine</td>
<td>10-25</td>
<td>50-100</td>
<td>300</td>
<td>Anticholinergic, caution in cardiac pts., monitor</td>
</tr>
<tr>
<td>Mitrazapine</td>
<td>15</td>
<td>30-45</td>
<td>45</td>
<td>Sedative in lower doses</td>
</tr>
<tr>
<td>Escitalopram</td>
<td>10</td>
<td>20-10</td>
<td>20</td>
<td>Some reports of QT prolongation esp. in higher doses.</td>
</tr>
<tr>
<td>Citalopram</td>
<td>10</td>
<td>20-40</td>
<td>40</td>
<td>Appears safest for pt. with comorbid cardiac conditions</td>
</tr>
<tr>
<td>Setraline</td>
<td>25</td>
<td>50-150</td>
<td>20</td>
<td>In general should be given in day time, divide higher doses</td>
</tr>
<tr>
<td>Other 1st line Agents</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Nonpharmacological Management:
There is considerable evidence in support of psychotherapy for treating depression in elderly people (Scogin, Welsh, Hanson, Stump, J & Coates, 2005). Psychotherapies which are commonly used in primary care settings for the elderly are supportive psychotherapy, problem solving psychotherapy and cognitive-behaviour therapy (Gallagher et al., 2000). Interpersonal therapy for primary care (IPT–PC) is a newly adapted intervention for older primary-care patients and thus its efficacy in older primary-care patients is not well established (Bruce et al., 2004). While other interventions have been explored in treating late-life depression, CBT is considered to have the largest evidence base for treatment of late-life depression.

Supportive Psychotherapy for Primary Care (SPPC)
Supportive psychotherapy is a form of long-term psychotherapy that aims to optimise patients’ functioning, promote their autonomy, enhance their self-esteem, and lessen their anxiety and distress (NMHS, 2003). Central to the management of any depressive disorder is the presence of a treating professional who attempts to and sustains an engagement with the person, a dialogue based on understanding the depressed person's symptoms, and allowing that person to ventilate problems for discussion and resolution. This is the essential supportive therapy. It must be regular, preferably of a predictable duration, and allows for questions by the ‘therapist’ as well as new input by the patient. Encouragement and optimism by the therapist to the patient are the modes of support, whatever the subject matter discussed (NSW Health, 2001).

Problem-Solving Therapy for Primary Care (PST–PC)
Problem-solving therapy is a form of psychotherapy aimed at developing and improving a patient's coping skills and enhancing their ability to handle upsetting life stresses. There is a growing evidence base supporting the use of problem-solving therapy for primary care (Area’n & Ayalon, 2005) in older primary-care patients. The theory behind PST–PC states that depression is mediated by the ability to solve everyday and major life problems. When faced with repeated difficulties in managing life problems, older adults become demoralized and hence begin to feel helpless over their ability to cope. The key to PST–PC is to learn how to solve problems, so that depression can be dealt with effectively. PST–PC is a brief intervention, lasting between six and eight sessions in older patients. The initial visit is one hour long to allow for an overview of PST–PC and a chance to establish rapport. Subsequently, each visit is approximately 30 min in length.

Cognitive Behavioral Therapy (CBT)
CBT has proven effectiveness in the treatment of mild and moderate depression (NMHS, 2003). Its basic premise is that depression is a function of how people view themselves, their environment and their future, which in turn effects how they actually cope with psychosocial stress. CBT addresses these issues by teaching people coping skills that change how they process information from their environment (cognitive restructuring e.g. identifying and challenging maladaptive thoughts and replacing them with more realistic and adaptive healthy thoughts), how they interact with other people (social-skills training) and how they manage their mood (behavioral activation). A modified version of CBT, Telephone based cognitive behavioral therapy (CBT-T) is also being used in primary care to provide access to therapy for elderly consumers who are too disabled to attend regular therapy sessions. In summary, depression in elderly people is common in primary-care medicine and befitting professional help at first contact will lead to a better prognosis. In the realms of assessment and management numerous excellent tools, techniques and types of intervention exist; choice as to what to select can depend on the nature and strength of the primary-care clinic. Studies have shown that interventions delivered by primary care team are effective in significant number of elderly with mild to moderate depression. Nonpharmacological interventions are also effective when properly delivered and it is feasible in primary-care. A combined psychological and pharmacological treatment always yields better result than any individual. Primary care team can play a critical role in the management of elderly with depression in primary-care settings.
Severity – Mild, Moderate and Severe

Discuss pharmacological and non-pharmacological intervention with patient
Include: - Therapeutic effects
- Adverse effects
- Compliance
- Frequency and duration of therapy session

Nonpharmacological intervention
• Exercise, Yoga
• Sleep hygiene
• Guided self help
• Watchful waiting
• Psychotherapy-SP-PC,PST-PC, CBT (6-8 session)

Choose an antidepressant based on:
• Side effect profile
• Past Response
• Severity of depression

Start at a recognized dose and titrate up to therapeutic level
(Assess efficacy over 6 weeks)
Continue/advice suitable nonpharmacological intervention

Inadequate Response
Inadequate or No response

Review diagnosis
Increase to maximum dose tolerated
(Adequate trial= max\textsuperscript{m} dose for 6 weeks)

Effective

Maintain effective therapy for 1 year after first episode.

Effective

Review Compliance
Choose antidepressant and further adequate trial

Effective

Refer to Specialist

Difficult to deal

Non response/ Poor response

Moderate to Severe

MILD

Figure 2: Flow chart for management of depression
(Flow charts adapted from Consensus guidelines-New South Wales \textsuperscript{28} and further information from NICE guidelines\textsuperscript{19})
Acknowledgment

I would like to thank Dr. Ron Sharkey for providing necessary motivation and support in the preparation of this manuscript.

Reference


Preventing Suicide: Synopsys from WHO Suicide Report and Strengthening Suicide Attempt Surveillance System in Fiji

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Keywords: Suicide Attempt Surveillance System, Suicide Prevention in Fiji.

Introduction
Public health surveillance is essential to the practice of public health and to guide prevention and control activities and evaluate outcomes of such activities. (Hall et al, 2012). The public health surveillance is systematic in which it involves ongoing collection, management, analysis, and interpretation of data followed by the dissemination of these data to public health programs to stimulate public health action. (Thanker, Qualters, & Lee, 2012). Improved surveillance and monitoring of non-fatal suicidal behaviour (suicide attempts/self-harm) is a core element of the public health model of suicide prevention, since the person who has attempt suicide has the highest risk for committing suicide (WHO, 2014; CDC, 2014; Crosby et al, 2011). Ministry of Health and Medical Services (MoHMS) in Fiji have an existing surveillance system established to serves as the basis for planning, implementation, and monitoring & evaluation of all components required to improve disease-specific and general service delivery system. (Ministry of Health and Medical Service, 2011) Fiji will continue to provide an evidence-based high quality HIS to ensure that the health status of all citizens of Fiji is improved by strengthening a well-functioning health system and delivery of better quality health services resulting in better individual health outcomes. (Ministry of Health and Medical Service, 2011).

This paper aims to provide a synopsis from the World Health Organization (WHO)’s first report on suicide, Preventing Suicide-A Global Imperative (WHO, 2014), to review the importance of the surveillance system, and using these as guidance, to propose ways to strengthen the suicide attempt surveillance system in Fiji. This paper will also suggest strategies on how Fiji can commit themselves to the global target of reducing the suicide rate in their countries by 10% by 2020, the commitment made globally as the result of the 65th World Health Assembly adopted resolution WHA65.4 in May 2012 on the global burden of mental disorders and the need for a comprehensive, coordinated response from health and social sectors at the country level (WHO 2013).

Synopsis of WHO Suicide Report
The first WHO’s report on suicide, “Preventing suicide: a global imperative”, has been developed through a global consultative process and is based on systematic reviews of existing data and evidence as well as inputs from several different partners and stakeholders, both within and outside WHO. The report includes information on what is known about suicide across the world, groups at particular risk of suicide, and what can be done at both societal and individual level to reduce the number of deaths from suicide. It aims to increase the awareness of the public health significance of suicide and suicide attempts and to make suicide prevention a higher priority on the global public health agenda. The report reflects the public health model for suicide prevention (Figure 1). Following these steps, suicide prevention begins with surveillance to define the problem and to understand it, followed by the identification of risk and protective factors (as well as effective interventions), and culminates in implementation, which includes evaluation and scale-up of interventions and leads to revisiting surveillance and the ensuing steps.

Global epidemiology of suicide and suicide attempts
An estimated 803 900 suicide deaths occurred worldwide in 2012, representing an annual global age-standardized suicide rate of 11.4 per 100 000 population (15.0 for males and 8.0 for females)(Figure 2). Globally, suicide is the second leading cause of death in 15-29-year-olds.

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The ingestion of pesticide, hanging and firearms are among the most common methods of suicide globally, but many other methods are used with the choice of method often varying according to population group. There are indications that for each adult who died of suicide there may have been more than 20 others attempting suicide. Suicide is a global phenomenon, and all countries are affected. Seventy five percent of suicides occur in low- and middle-income countries. Suicide is an important cause of death across the lifespan.

**Risk and protective factors, and related interventions**

Frequently, several risk factors act cumulatively to increase a person’s vulnerability to suicidal behaviour. Risk factors associated with the health system and society at large include difficulties in accessing health care and in receiving the care needed, easy availability of the means for suicide, inappropriate media reporting that sensationalizes suicide and increases the risk of “copycat” suicides, and stigma against people who seek help for suicidal behaviours, or for mental health and substance abuse problems. Risks linked to the community and relationships include war and disaster, stresses of acculturation (such as among indigenous peoples or displaced persons), discrimination, a sense of isolation, abuse, violence and conflictual relationships. And risk factors at the individual level include previous suicide attempts, mental disorders, harmful use of alcohol, financial loss, chronic pain and a family history of suicide. Strategies to counter these risk factors are of three kinds (figure 3). “Universal” prevention strategies, which are designed to reach an entire population, may aim to increase access to health care, promote mental health, reduce harmful use of alcohol, limit access to the means for suicide or promote responsible media reporting. “Selective” prevention strategies target vulnerable groups such as persons who have suffered trauma or abuse, those affected by conflict or disaster, refugees and migrants, and persons bereaved by suicide, by training “gatekeepers” who assist the vulnerable and by offering helping services such as helplines. “Indicated” strategies target specific vulnerable individuals with community support, follow-up for those leaving health-care facilities, education and training for health workers, and improved identification and management of mental and substance use disorders. Prevention can also be strengthened by encouraging protective factors such as strong personal relationships, a personal belief system and positive coping strategies.

<table>
<thead>
<tr>
<th>Mental Health Policies</th>
<th>Universal</th>
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<tbody>
<tr>
<td>Policies to reduce harmful use of alcohol</td>
<td></td>
</tr>
<tr>
<td>Access to health care</td>
<td></td>
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<tr>
<td>Restriction of access to means</td>
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<tr>
<td>Responsible media reporting</td>
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<tr>
<td>Raising awareness about mental health, substance use disorders and suicide</td>
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</table>

<table>
<thead>
<tr>
<th>Interventions for vulnerable groups</th>
<th>Selective</th>
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<tbody>
<tr>
<td>Gatekeeper training</td>
<td></td>
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<tr>
<td>Crisis helplines</td>
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<table>
<thead>
<tr>
<th>Follow-up and community support</th>
<th>Indicated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment and management of suicidal behaviours</td>
<td></td>
</tr>
<tr>
<td>Assessment and management of mental and substance use disorders</td>
<td></td>
</tr>
</tbody>
</table>

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**Figure 2:** Global suicides by age and income level of country, 2012 (from WHO Suicide report, 2014)

**Figure 3.** Key effective interventions (from WHO Suicide report, 2014)
The current situation in suicide prevention

In terms of policy, 28 countries today are known to have national suicide prevention strategies, while World Suicide Prevention Day, organized by the International Association for Suicide Prevention, is observed worldwide on 10 September each year. Additionally, many suicide research units have been set up and there are academic courses that focus on suicide and its prevention. To provide practical help, non-specialized health professionals are being used to improve assessment and management of suicidal behaviours, self-help groups of bereaved have been established in many places, and trained volunteers are helping with online and telephone counselling.

In the past half-century, many countries have decriminalized suicide, making it much easier for those with suicidal behaviours to seek help.

Working towards a comprehensive national response for suicide prevention

Suicides are preventable. For national responses to be effective, a comprehensive multisectoral suicide prevention strategy is needed. To ensure that it is effective, the national strategy should include collaboration between health and non-health sectors at governmental and nongovernmental levels. It should involve communities and also the media to encourage responsible reporting of suicide. The strategy should improve surveillance as well as policies relating to mental health and alcohol in particular. Early prevention should be a core component of any strategy developed. Restricting access to the means for suicide works. An effective strategy for preventing suicides and suicide attempts is to restrict access to the most common means, including pesticides, firearms and certain medications.

Health-care services need to incorporate suicide prevention as a core component. Mental disorders and harmful use of alcohol contribute to many suicides around the world. Early identification and effective management are key to ensuring that people receive the care they need. Improving the quality of care for people seeking help can ensure that early interventions are effective. Improved quality of care is the key to reducing suicides that arise as a result of mental and alcohol use disorders and other risk factors. Mental health and alcohol policies should prioritize care, promote its successful integration into overall health-care services, and support sufficient funding for the improvement of these services.

Communities play a critical role in suicide prevention. They can provide social support to vulnerable individuals and engage in follow-up care, fight stigma and support those bereaved by suicide. In all countries, particularly those with limited resources, the importance of communities and their support programmes in suicide prevention cannot be overstated. Effective social support within communities and individual resilience can help protect vulnerable persons from suicide by building and improving social connectedness and skills to cope with difficulties. Specifically, the community can provide help in crisis situations, keep in regular contact with people who have attempted suicide, and support persons bereaved by suicide.

The way forward for suicide prevention

Ministers of health have an important role in providing leadership and bringing together stakeholders from other sectors in their country. In countries where suicide prevention activities have not yet taken place, the emphasis is on seeking out stakeholders and developing activities where there is greatest need or where resources already exist. It is also important to improve surveillance at this stage. In countries with some existing suicide prevention activities, a situation analysis can show what is already in place and indicate where there are gaps that need to be filled. Countries that already have a relatively comprehensive national response should focus on evaluation and improvement, updating their knowledge with new data and emphasizing effectiveness and efficiency.

While moving forward, two points should be considered. First, suicide prevention activities should be carried out at the same time as data collection. Second, even if it is felt that a country is not yet ready to have a national prevention strategy, the process of consulting stakeholders about a national response often generates interest and creates an environment for change.

Indicators that measure the strategy’s progress can include:
• a percentage reduction in the suicide rate;
• the number of suicide prevention interventions successfully implemented;
• a decrease in the number of hospitalized suicide attempts.

Importance of surveillance system for the attempted suicide

The suicide attempt behaviour will be the signpost for a need for a good surveillance system for the prevalence, demographic patterns and methods involved in hospital presentations of attempted suicide in Fiji that can provide important information in the development of suicide prevention strategies for Ministry of Health and Medical Services. Figure 4 below illustrated the extent of suicide behaviour, fatal and non-fatal in Fiji.

Benefits of Suicide Attempt Surveillance

The information provided by surveillance data of divisional hospital that are treating suicide attempts will contribute to key areas in addressing knowledge gaps and improving service provision for individuals presenting to hospital following attempted suicide (Figure 5). Establishment of sustainable and long-term surveillance systems for hospital treated suicide attempts enable identification of patients who present with repeated acts of attempted suicide over time and risk factors associated with repetition (Arensman et al, 2013; Perry et al, 2012; Lilley et al, 2008).
Definition and classification of suicide attempt.

History has indicated that for years researchers, epidemiologist and psychiatrist were still not able to agree on a standard terminology of definition for suicide attempt. For example, over the years a wide range of different terms have been used to indicate varying types of intentional self-harming behaviour with varying degrees of suicidal intent and varying underlying motives, such as ‘self-injury’, ‘parasuicide’, ‘attempted suicide’, ‘deliberate self-harm’ and ‘self-harm’. Arensman & Keeley (2012) argued that a formation of a uniformed term for suicide attempt will be complicated due to the varying levels of suicidal intent and heterogeneity of motives reported by people engaging in self-harming behaviour. Arensman & Keeley (2012) also argued that evidence shows suicidal intent to be a fluid rather than a dichotomous, “either/or” concept any descriptor term that takes a side in the either/or argument by excluding or including ideas of intent, becomes problematic as it has the potential to exclude a section of the self-harm population. This paper also suggests definition to remain within the parameters of self-harm or suicide attempt is suggested as the nomenclature for surveillance as these terms acknowledge and encompasses recent findings on self-harm behaviour: • Subgroups of self-harm patients, characterized by mild versus those with severe self-harm, represent opposite poles of dimensional severity. However, those characterized as mild do not show zero suicidal intent nor do they show absence of suicidal preoccupation. • Even though research into self-harm sub-groups has identified statistically significant and clinically meaningful differences, consistent evidence on homogenous typologies of self-harm is lacking and the dimensionality of self-harm severity reflects the complexity of self-harm. (Arensman & Keeley, 2012) The classification of suicide and suicide attempts according to the WHO International Classification of Diseases (ICD-10, WHO, 1992) ensures uniformity and consistency of recorded information at global level.

Table 1: Overview of the Tenth Revision of ICD codes for intentional injury (X60-X84)

<table>
<thead>
<tr>
<th>TERM</th>
<th>SECTION</th>
<th>CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentional Self-harm</td>
<td>Injury and poisoning</td>
<td>Intentional Self-harm (Applicable to: Purposefully self-inflicted poisoning or injury and suicide (attempted)</td>
</tr>
<tr>
<td>X60-X69 Intentional self-poisoning*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X60 Intentional self-poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X61 Intentional self-poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkin-sonism and psychotropic drugs, not elsewhere classified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X62 Intentional self-poisoning by and exposure to narcotics and psychodepsleptics [hallucinogens], not elsewhere classified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X63 Intentional self-poisoning by and exposure to other drugs acting on the autonomic nervous system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X64 Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X65 Intentional self-poisoning by and exposure to alcohol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X66 Intentional self-poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X67 Intentional self-poisoning by and exposure to other gases and vapors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X68 Intentional self-poisoning by and exposure to pesticides</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X69 Intentional self-poisoning by and exposure to other and unspecified chemicals and noxious substances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X70 Intentional self-harm by hanging, strangulation and suffocation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X71 Intentional self-harm by drowning and submersion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X72 Intentional self-harm by handgun discharge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X73 Intentional self-harm by rifle, shotgun and larger firearm discharge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X74 Intentional self-harm by other and unspecified firearm and gun discharge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X75 Intentional self-harm by explosive material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X76 Intentional self-harm by smoke, fire and flames</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X77 Intentional self-harm by steam, hot vapors and hot objects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X78 Intentional self-harm by sharp object</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X79 Intentional self-harm by blunt object</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X80 Intentional self-harm by jumping from a high place</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X81 Intentional self-harm by jumping or lying in front of moving object</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X82 Intentional self-harm by crashing of motor vehicle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X83 Intentional self-harm by other specified means</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X84 Intentional self-harm by unspecified means</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Current Suicide Attempt Surveillance in Fiji

Currently, there were over 8,000 patients in PATIS (patient information system) who are recorded as being admitted for six months or more and in 2014 almost all of these patients have actually been discharged from the hospital, but the discharge has not been recorded in PATIS. (MoHMS, 2014). Below Table shows data from the Patient Information System (PATIS) database for suicide and suicide attempt for 2014 to 2015

Table 2 – Suicide attempt in Fiji for 2014 till September 2015. Health Information Unit, MoHMS

<table>
<thead>
<tr>
<th>Year &amp; Victims</th>
<th>Hanging</th>
<th>Paracetamol</th>
<th>Other Chemicals</th>
<th>Tablets</th>
<th>Injury</th>
<th>Burns</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2015(Apr–Sep)</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2014</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2015(Apr–Sep)</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Strengthening Suicide Attempt Surveillance in Fiji

The Global Suicide Report (WHO, 2014) argues that implementation of suicide attempt surveillance will require different steps in planning and preparation of a surveillance system of hospital treated suicide attempts.

To strengthen suicide attempt suicide and Fiji, a detailed overview is provided of standard operating procedures, required data items and procedural aspects of data coding and data entry. Considering the focus of surveillance on accessing hospital data on suicide attempts and associated patient characteristics, adherence to ethical guidelines and data protection procedures, and ensuring confidentiality is crucial, this is also addressed in detail.

Standard Operation

Data Collection

Data registration officers (DROs) or clerks for Fiji situation is the person responsible for the collection of information on consecutive cases of suicide attempts presenting to hospital emergency departments. Each DRO will work within a number of emergency departments of public hospitals to gather and collate this information. The DRO will be responsible for the identification of cases from hospital records of incidences of suicide attempts, the extraction of relevant information from these records, and the systematic recording of this anonymous data.

The recommended principle duties of the DRO following:
• To identify in a systematic way suicide attempts from attendance recordsof hospital emergency departments within a particular region, using pre-defined inclusion and exclusion criteria (section 2.4)
• To securely transfer this data to the Data Manager of the surveillance system at agreed intervals, e.g. once a month
• The DRO may also be required to check any coding queries, and to perform quality check activities as and when required
• The DRO is required to work within the national guidelines of data protection and he/she will sign a confidentiality agreement at the appointment by the surveillance management team.

Case ascertainment

A number of guidelines must be adhered to in order to ensure a consistent and uniform approach to case ascertainment for all DROs. The DRO must check through all entries in the casualty book/records or the relevant emergency department computer file that logs every attendance at the hospital’s emergency department. If the hospital does not permit the DRO to access the emergency department computer system, then a printout must be sought that details all attendances. If the hospital will only provide such printout for specified types of emergency department attendance, then it is important that the categories are broad enough to include as close to 100% of all suicide attempt presentations as possible.

Data items

It would be recommended for the surveillance system on hospital treated suicide attempts to include core data items, which are consistent with major existing surveillance systems at international level. In addition, a list of optional data items is proposed, which are relevant in terms of obtaining further detailed information on socio-demographic, psychosocial and psychiatric characteristics of the patients involved.

Registration forms and data entry

Information on each case of attempted suicide should be recorded on a registration form or entered directly in an electronic data entry system. Registration forms and electronic data entry systems should include all core data items and as many of the optional data items as is feasible.

Coding and data entry

Ideally, data should be entered directly into an electronic database as this is the most efficient method of collating the data. Where this is not possible, printed registration forms can be used and data can be entered into a computerized system after this has been securely transferred to the Data Manager of the surveillance system.
Governance and requirements of coordinating agencies.
WHO (2014) recommended that members of the national or regional surveillance management team are appointed by a selection committee representing members of the advisory and technical group. The surveillance management team should be led by a Director with responsibility for managing the surveillance team, and who would establish the links with the general hospitals and ministries involved. A Senior Surveillance System Manager would be required with the main responsibility for the daily management of the surveillance system including providing training and supervision to the staff members involved in data collection in the hospitals. In addition, the surveillance management team should comprise of a Data Manager for the purpose of data management and data analysis. The team should be able to consult with a Biostatistician/Statistician on statistical issues and conducting appropriate statistical analysis.

**Costs and potential funding sources**
Developing, implementing and maintaining a surveillance system for hospital treated suicide attempts, requires substantial resources. Preparing a realistic budget and allocating funding is a key objective of planning a surveillance system. The budget will vary depending on the scope of the surveillance system, i.e. regional or national.

Table 3 – Estimated budget required for Ministry of Health and Medical Services to maintain the suicide attempt surveillance system every year.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Estimated cost Fiji dollar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time manager</td>
<td>1</td>
<td>$25,000</td>
</tr>
<tr>
<td>Travel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For data collection purposes</td>
<td>1</td>
<td>$2,000</td>
</tr>
<tr>
<td>training workshops</td>
<td>2</td>
<td>$1,500</td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td>$3,000</td>
</tr>
<tr>
<td>Quality assurance checks</td>
<td></td>
<td>$200</td>
</tr>
<tr>
<td>Monitoring and evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office space and associated</td>
<td>1</td>
<td>$1,500</td>
</tr>
<tr>
<td>costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment, computers, servants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>software IT support etc</td>
<td>1</td>
<td>$1,500</td>
</tr>
<tr>
<td>Dissemination</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion
In this paper we have review the WHO suicide report and recent findings regarding the importance of developing surveillance and referral system for the people who attempted suicide. These are the population who has the highest risk of attempting suicide again, so proper surveillance and referral systems is crucial to prevent them from further harm.

Based on the review and taking into the situation of Fiji, we have suggested a model for suicide surveillance in Fiji. The surveillance system have been in place for Divisional Hospital using Patient Information System, PATIS.

The WHO suicide attempt /self-harm surveillance model will be more feasible with PATIS installed at Divisional Hospital and other health facilities using ICD 10 codification. This means that this suicide attempt / self-harm surveillance coverage will be restricted to certain health facilities.

There are more opportunities for Fiji to implement this suicide attempt / self-harm surveillance as step up approach using the existing PATIS at divisional hospital. An annual budget of about FD$30,000 will be sufficient to maintain this surveillance system in long term. This will allow instant decision making for health care manager, policy makers, researcher and advocates of suicide prevention.

Reference


The Process of Decentralization of Mental Health Services in Fiji

J. Andrews1, R. Sharkey*

Keywords: Decentralisation, Mental Health Services

This paper will discuss how the Ministry of Health & Medical Services (MOHMS) of Fiji has begun the process of extending community-based mental health services.

The Mental Health Decree (2010; 4(1)(a)) stipulates that “due regard must be given as far as practical and subject to available resources to the principles approved by the World Health Organization (‘WHO’) in relation to mental health”. Fiji’s national mental health strategies are linked to the WHO Mental Health Action Plan’s (2013) recommended actions. The second objective of that plan is “to provide comprehensive, integrated and responsive mental health and social care services in community-based settings”. MHMS is committed to meeting the objective so has increased resources to community services using both specialist mental health and primary care staff.

WHO suggests seven reasons for integrating mental health care into primary health care:
1. Burden of mental disorders is great
2. Mental and physical health problems are interwoven
3. The treatment gap for mental disorders is vast
4. Mental health in primary care enhances accessibility
5. It promotes respect for human rights
6. It is affordable and cost effective
7. It generates good health outcomes (WHO, 2008)

These arguments are reflected in Figure 1.

The Mental Health Decree and the WHO Action Plan have set the direction for deinstitutionalisation and further provision of community mental health services. Much has been accomplished since the first services in 2004 but much needs to be done. Stress Management Wards have been established in Divisional Hospitals. Community Mental Health Teams (CMHT) have been established in three Divisions, separated from hospital services, and integrated into public health services. Mental health clinics are gradually being integrated into primary health clinics. The number of specialist mental health outreach clinics has also been increased. More than 400 mental health and primary health staff have undertaken training of the WHO mhGAP (mental health gap) programme. It is planned to train the rest of public health staff by end of 2016. Pilot programs to train community workers (non-professional) are underway. A Recovery Focus is being encouraged throughout mental health services. Nationwide decentralisation or localisation of mental health care services is a long term objective. This objective will be met when St Giles Hospital is a much smaller unit with a maximum of approximately 40 beds for clients who are too difficult to manage in less-restrictive environments or who are forensic patients who are not permitted to be managed in other settings. There will be mental health facilities or wards with secure rooms in the Divisional Hospitals. Sub-divisional hospitals will have human resources capable of assessing and managing mental health services users. There will be community mental health teams throughout Fiji with referral and discharge pathways to and from the teams to Divisional and Sub-divisional hospitals. There will be psychosocial rehabilitation centres and services scattered through divisions. Public Health staff will be trained in mental health assessment and management and also have clear referral and discharge pathways.

The process of decentralisation, will allow specialist mental health services to focus their resources and clinical expertise towards the people with severe and enduring mental illness who cannot be managed in a less-restrictive environment (a principle legislated in the Mental Health Decree). In the future, most people will be supported in the community, as close to their homes as possible. Divisional community mental health teams will be the

\[\text{Figure 1: Optimal Mix of Services Pyramid}\]
These pathways prescribe processes for assessment, referral, transfer, admission, care, discharge and follow-up of mental health clients. They will be used alongside Clinical Guidelines for certain mental illness conditions (e.g. depression, psychosis) and circumstances (e.g. involvement of police) and by mhGAP Intervention Guidelines (WHO, 2010).

It is possible that the first contact of a mental health client will be at any one of the agencies or groups shown in Figure 2. Community Mental Health Teams (CMHT) will be responsible for coordination of all services between agencies. They will also be responsible for accumulation and storage of all client records. They will also be responsible for communication of records to the CMHTs. Police and Ambulance will be involved through their responsibilities under the Mental Health Decree (2010). General Practitioners and Private Health Facilities may be involved because they wish to refer someone to mental health services or ask for someone to be discharged to them for on-going care.

Non-government organisations and Community Health Workers are not responsible for the mental health management of clients but will be asked to communicate details of contacts to the appropriate CMHT. Details of responsibilities will be recorded in the Memorandum of Understandings (MOU) or Letters of Agreement which will be signed between the organisations and the Ministry of Health and Medical Services (MoHMS) in 2015.

The process of decentralisation provides excellent opportunities for research activities. The most important outcomes are those for clients. The ultimate outcome is improved mental health of the population. Research in other countries has shown improved outcomes for clients when mental health services are decentralised. MHMS will work with academics and other stakeholders to design research projects to measure change in Fiji. Indicators used currently include the important measures of suicide and attempted suicide rates. Future research will measure incidences of mental disorders such as depression and psychosis. Designs will include strategies to measure the effect of decentralisation of services on these indicators.

References

Keywords: Mental Health & Suicide Policy

Mental Health Services' broad mandate is to promote the mental health of all people in Fiji. Mental Health Services' involvement in the many issues surrounding mental health is based on the fundamental principles of wellness, autonomy, respect, non-maleficence, beneficence, justice and best-practice.

Ten broad policy statements have been formulated to steer the direction of mental health services in Fiji 2015-2020. These policies follow the directions of the Mental Health Decree (2010), the Roadmap for Democracy and Sustainable Socio-Economic Development 2010-2014 and the WHO Mental Health Action Plan 2013-2020. The statements are expanded and linked to indicators in the National Mental Health Strategic Plan (NMHSP) 2015-2019 and the Ministry of Health and Medical Services – Mental Health Unit – Business Plan 2015. The statements are reflected in Table 1.

Table 1: Ten Broad Mental Health Policy Statements

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Policy Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Mental Health services will be organised in such a way as to provide all Fijians with timely access to high quality, coordinated care appropriate to their condition and circumstances.</td>
</tr>
<tr>
<td>2.0</td>
<td>National policies, strategies, programs, laws and regulations relating to mental health and suicide prevention will continue to be developed, monitored and implemented in line with evidence, best-practice, the Convention on the Rights of Persons with Disabilities and other international and regional human rights instruments.</td>
</tr>
<tr>
<td>3.0</td>
<td>Knowledge and skills of general and specialised health care workers will be built to deliver evidence-based, culturally appropriate and human rights-oriented mental health and social care services.</td>
</tr>
<tr>
<td>4.0</td>
<td>A dedicated mental health budget will be provided for the successful implementation of this policy, strategic plan and mental health legislation.</td>
</tr>
<tr>
<td>5.0</td>
<td>Essential psychotropic medications, medical products and technology will be continuously and consistently available at all facilities providing mental health services.</td>
</tr>
<tr>
<td>6.0</td>
<td>Mental Health will be integrated into the routine health information system. This will identify, collate, routinely report and use core mental health data, disaggregated by sex and age (including on completed and attempted suicides) to improve mental health service delivery, promotion and preventive strategies.</td>
</tr>
<tr>
<td>7.0</td>
<td>There will be improved research capacity and academic collaboration on national priorities for research in mental health and suicide prevention, particularly for operational research with direct relevance to service development and implementation and the exercise of human rights by persons with mental disorders.</td>
</tr>
<tr>
<td>8.0</td>
<td>Locus of care will be systematically shifted away from long stay psychiatric hospitals towards non-specialised health settings with increased coverage of evidence-based interventions, using a network of linked community-based mental health services, collaborating with non-government organisations.</td>
</tr>
<tr>
<td>9.0</td>
<td>Stakeholders from all relevant sectors, including persons with mental disorders, carers and family members will be engaged in the development and implementation of policies, laws and services relating to mental health and suicide prevention.</td>
</tr>
<tr>
<td>10.0</td>
<td>People with mental disorders and psychosocial disabilities will be given a formal role and authority to influence the process of designing, planning and implementing policy, law and services.</td>
</tr>
</tbody>
</table>

Mental Health Services, as reformed by the Policy, are shown in Figure 1.

1. Ministry of Health and Medical Services
2. Address of correspondence: ronsharkey2@gmail.com

Volume 5, Issue 1, 2016
This policy aims to institute five principles which WHO has identified as essential for localisation of mental health services: community-based services must be in place; the health workforce must be committed to change; political support at the highest and broadest levels is crucial; timing is key; and additional financial resources are needed (WHO, 2014).

Statements 6.0 and 7.0 relate directly to research. There are almost no baseline measurements for mental health in Fiji. The policy directs the Ministry of Health and Medical Services to reform routine health information systems so that core mental health data is collected and used to improve mental health service delivery, promotion and preventive strategies. The Mental Health Unit of the Ministry has identified indicators (Tables 3-5) to measure outcomes of mental health care, directed by the NMHSP.

Table 2: MOHMS Mental Health Indicators

<table>
<thead>
<tr>
<th>Indicator No.</th>
<th>Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Suicide rate per 100,000 population: &lt;11 per 100,000. Baseline: 9.8 per 100,000</td>
</tr>
<tr>
<td>2</td>
<td># of cases of intentional self-harm (not including death by suicide): 169. Baseline: 188</td>
</tr>
</tbody>
</table>

Decreases in suicide rates are core indicators of the Ministry’s Corporate Plan (2015),
- Incidence of psychosis managed by community health
- Incidence of major depression managed by community health
- Incidence of bipolar disorder managed by community health
- Incidence of all major mental health disorders managed by community health

Until baseline measures are available, it is not possible to prove the effectiveness of interventions.
- National Wellbeing Score - % scoring over 13 on WHO(5) Wellness Scale

Fiji is committed to a Wellness approach to health care. Instead of concentrating on illness, a national program is aimed at keeping people well. As part of this program, a measure of emotional well-being has been incorporated into the National Wellness Centre’s programs.

The WHO (5) Wellness Scale scores people on emotional well-being with a scale of 0-25. A score of less than 13 is regarded as an indication of possible depression or stress.

Table 3: Baseline Measures to Measure Effectiveness of Mental Health Services

<table>
<thead>
<tr>
<th>No.</th>
<th>Baseline measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Increase in referrals to Stress Management Wards</td>
</tr>
<tr>
<td>2</td>
<td>Decrease in referrals to St Giles Hospital</td>
</tr>
<tr>
<td>3</td>
<td>Increase in discharges from Stress Management Wards to community health</td>
</tr>
<tr>
<td>4</td>
<td>Increase in discharges from St Giles Hospital</td>
</tr>
</tbody>
</table>

The above four items will provide baseline measures to measure the effectiveness of attempts to move resources and service delivery from Fiji’s specialist mental health hospital, St Giles to the community. Increase in (1) and a decrease in (2) will be an indication that more people are being referred to district hospitals rather than to St Giles. Increases in (3) and (4) will be indicators that more people are being discharged from hospitals to community mental health care.

References