

## Health Call Centres – The Financial and Healthcare Benefits

*Dr Matthew Cullen - McKesson Asia-Pacific*  
*Dr Andrew Wilson - McKesson Asia-Pacific*

### Introduction

Health Call Centres (HCC) are sophisticated operating environments that combine the use of;

- Telephone and information technology
- Electronic decision support software
- Clinicians
- Quality improvement processes
- Detailed reporting

They are a highly specialised undertaking with very few organisations having the expertise to provide HCC that operate safely and cost effectively.

HCC are only cost effective at scale. For example the Western Australia Health Call Centre telephone triage service costs \$23 per call versus an average of six General Practice run telephone triage services costing \$162 per call<sup>1</sup>.

In presenting this analysis we have assumed that a “scaled” HCC would be operating 24 hours, 7 days per week providing a range of services as follows:

- **Telephone Triage** provides nurse advice to consumers with acute medical concerns with the aim of directing the caller to the “right care at right place and at the right time”
- **Mental Health** services are aimed at improving access, risk assessment, early intervention and telephone case management
- **Disease Management** delivers proactive telephone healthcare to individuals to support the self management of chronic illnesses such as asthma, diabetes and heart failure
- **Targeted interventions** around high service users such as elderly residents of aged care facilities or frequent Emergency Department attendees

The data to support the various statements below are derived from multiple sources. These include program evaluations by organisations such as;

- Curtin or Massey Universities
- Auditor General reports
- Consultant reports
- McKesson internal data
- State and Australian government reports
- Peer reviewed medical journals.

As will be noted there are cost benefits both from a Federal and State perspective.

### Hard Savings and Benefits

#### 1. Telephone Triage

- 25% reduction in After Hours General Practitioner MBS Item Numbers since the introduction of *Health Direct* in Western Australia. This has been associated with a reduction (not

---

<sup>1</sup> Commonwealth Department of Health (2002), *After Hours Primary Care Trials, National Evaluation Report*. Commonwealth of Australia 2002 - [http://www.health.wa.gov.au/publications/documents/StrategicDevelopment\\_RuralMental\\_EvaluationReport\\_Jan2004.pdf](http://www.health.wa.gov.au/publications/documents/StrategicDevelopment_RuralMental_EvaluationReport_Jan2004.pdf)

quantified) in associated expenditure for pathology and radiology. MBS utilisation in other states aside from WA increased during the evaluation period<sup>1</sup>

- A reduction in the increase in Emergency Department (ED) attendances. In WA, ED attendances have increased by 1% in the past few years as opposed to 6-8% in some other states. This has been particularly due to a reduction in low acuity Category 4 and 5 attendances<sup>2</sup>
- US data suggests a Return on Investment (ROI) of just under \$1.50 for every dollar spent<sup>3</sup>
- McKesson New Zealand data reveals a ROI of \$1.75 for every dollar spent. This was on the basis of comparing the pre-intention versus actual service utilisation after telephone triage<sup>4</sup>
- Analysis by McKesson in NSW and SA as part of preparing a business case for targeted telephone triage (focused on EDs, ambulance and nursing home residents) suggest a ROI of just over \$2 for every dollar spent. In addition there were substantial operational gains in terms of freeing up nursing time in the ED which were not considered part of this cost model<sup>4</sup>

## 2. Mental Health

- Good data on **service substitution** from South West 24 and the Greater Murray Accessline. For example in South West Area Health Service in WA the mental health telephone triage program accounts for 15% of the budget but 50% of the occasions of service and cost of telephone interventions is about 25% that of a phone based intervention<sup>5</sup>
- A cost neutral ROI at minimum but with significantly improved access, true 24 hour coverage and responsiveness. This improves clinical risk management, early intervention and prevention<sup>6</sup>
- 20% of users of a mental health telephone triage and case management service in South West area of Western Australia stated they would have committed suicide without the service and a further 20% stated that they would have contemplated suicide<sup>7</sup>

## 3. Disease Management

- Asthma: 50% fewer inpatient bed days, 28.2% reduction in ED visits, 6.2% fewer hospital outpatient department<sup>8</sup>
- Diabetes: 5.7% fewer ED visits, 23% fewer inpatient bed days, 8.2% fewer hospital outpatient department<sup>9</sup>
- Congestive Heart Failure: 23% fewer hospitalisations, 26% fewer inpatient bed days, 44% fewer heart failure hospitalizations, 17% lower costs<sup>10</sup>
- Various independent reviews would suggest a Return on Investment of between \$1.50 and \$3 for every dollar spent<sup>11</sup>

---

<sup>2</sup> ACIL Tasman (2004) *National approach to health call centres, lessons from existing services* - [http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pcd-programs-hcc-nat\\_app.htm](http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pcd-programs-hcc-nat_app.htm)

<sup>3</sup> Ernst and Young LLP (1998) *Preliminary analysis of changes in the utilization of emergency department and physician office visits following the implementation of Firsthelp by the George Washington University Health Plan*

<sup>4</sup> McKesson Asia-Pacific internal data

<sup>5</sup> South West Area Health Service internal data

<sup>6</sup> South West Area and Greater Southern Area Health Service internal data

<sup>7</sup> Department of Health WA (2004), *Health Call Centre Rural Mental Health Service trial programs, AUS*

<sup>8</sup> Berg.G, Johnson A, Yin M McKesson Health Solutions, *Utilization and Financial Outcomes of an Asthma Disease Management Program Delivered to Medicaid members*. Disease Manage Health Outcomes, USA

<sup>9</sup> Berg D, Wadhwa S, (2002) *Diabetes Disease Management in a Community-Based Setting, Managed Care 2002*, Medimedia USA

<sup>10</sup> Berg D, Johnson A, Wadawa S (2004), *A matched-cohort Study of Health Services Utilization and Financial Outcomes for a Heart Failure Disease Management Program for elderly patient*" JAGS 52:1655-1661, 2004 American Geriatrics Society

<sup>11</sup> Piette J, (2005) *Using Telephone Support to Manage Chronic Disease*, California Healthcare Foundation, US

#### 4. Innovative Targeted Services

- WA care coordination service targeted at elderly residents of nursing homes led to a 30% reduction in hospital presentations and ambulance transport<sup>12</sup>

#### Softer Benefits and Savings

These have been aggregated across the various HCC services because in varying degrees they apply to all:

- An increase in the number and cost-effectiveness of healthcare instances
- Improved access and responsiveness e.g. – 80% calls answered within 20 seconds with low caller abandonment rates.
- Increased opportunities for early intervention – the barrier to contact a HCC is much lower than to travel to a doctor, an ED or mental health service. Early intervention translates into reduced morbidity, reduced admission rates and a reduction in loss of productivity via ill health
- Reduction in morbidity and mortality via prompt identification of problems such as meningitis, heart attacks and acute suicide
- Benefits for police and community services
- Improved after hours and non-metropolitan access to care
- Improved treatment compliance and adherence with the doctors prescribed treatment plans (both pharmacological and lifestyle)
- Cost effectiveness for regional, rural and remote communities by a reduction in lost productivity from time wasted travelling to and from medical appointments and hospitals
- Improved the appropriateness of attendance to doctors and Emergency Departments
- Significantly improved knowledge of self management for minor acute medical problems
- Significantly improved knowledge around self management of chronic illness
- High levels of consumer satisfaction. Independent expert audits of existing McKesson services in Australia and New Zealand have shown between 95% and 98% satisfaction
- High levels of satisfaction from health professionals who have had direct experience with the services
- Support for GPs in rural and remote communities will assist with GP retention
- Strong evidence of clinical safety
- Robust utilisation data to assist with health care service planning

#### Conclusion

HCC services such as telephone triage services are, at minimum, cost neutral or have an overall positive ROI.

However, the benefits are clear when one examines the benefits of HCC more broadly. This includes their capacity to address many structural issues in the health care system such as, ED access block, access issues in rural and after hours and staffing problems, as well as their ability to impact positively on those with chronic physical and mental illness.

---

<sup>12</sup> Department of Health, Western Australia internal data

