Shifting the wait: meeting the demands for paediatric speech pathology services

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Introduction
The challenge of adequately servicing the paediatric speech pathology needs of rural communities is a well-documented and ever-changing one.1,2,3 Over time, clinicians have tried and tested a plethora of service delivery models3,4,6,7,8 in an attempt to best and most fairly meet the demand for services. Rural paediatric speech pathologists are typically specialist-generalists treating the whole gamut of communication and swallowing impairment from birth to 18 years utilising multiple service models simultaneously to address the needs of the caseload. Intervention models are often selected and applied to address need according to diagnosis, with key examples being parent training approaches, small group therapy, home or school programming, therapy via tele or videoconference, and most commonly, individual therapy.8,9 The ultimate aim of using these models, is to provide the best service to the client and adequately manage an entire caseload with equity.

While there is some evidence for the application of particular intervention models for specific diagnoses10,11,12,13, the evidence base is limited. Correct implementation of some of these models (e.g. 30 weeks of individual therapy) may be unrealistic to achieve in rural areas in the face of lengthy waiting lists, and staff recruitment and retention difficulties.1,2,3

The quest for the ultimate service model that draws from the evidence base, addresses the needs of clients and their caregivers and enables the timely servicing of all referrals, is challenging for all speech pathologists. Rural speech pathologists face further obstacles; challenges for clinicians providing the services with recruitment and retention issues, and challenges for clients trying to access services such as distance, lack of public transport and expense.1,2,3 Getting service delivery right becomes even more difficult.

Inequity of service delivery in rural areas is both well known and well documented across the Australian health care literature.1,2,3,14 Adding to this, data suggests that only 4.5% of speech pathologists practice in rural areas, where about 30% of Australia’s population live.15

The speech pathology department at Tamworth Community Health Service (TCHS) has faced its share of challenges over the past 15 years, often in the form of recruitment and retention issues.2,16,17 Almost every type of service delivery model has been considered and implemented at TCHS in an attempt to reduce an ever-increasing waiting list, and create a stable service system that has the capacity to meet the needs of individual clients, the community as a whole, and the staff who provide the clinical services.

With the exception of referrals for paediatric feeding (these were prioritised immediately due to the clinical urgency of the referral) all children were placed on a waiting list and caregivers were contacted and offered an initial assessment when their child came to the top of the list. In the past ten years, the wait for assessment has been as low as six months18, but this was during a time when no therapy was being provided, only assessment and programming. At worst, and more typically when both assessment and therapy was being provided, the wait was anywhere from 12 to 16 months.18 Therapy services had been greatly restricted in an effort to keep up with demand. The most recent caseload management model offered children with:

- mild difficulties, home and/or school programming only followed by discharge
- mild to moderate difficulties, four therapy sessions followed by discharge
- moderate to severe difficulties, four therapy sessions, every second school term, with a maximum of eight sessions and then discharge.
A review of service models being used by similar regional departments across NSW was undertaken to identify alternative service delivery options that could be utilised in Tamworth to put an end to service instability and waiting list blowouts. The General Practice (GP) Model\textsuperscript{19} developed by speech pathologists at Albury Community Health Centre, based loosely on the operation of General Practitioners in busy medical practices, was selected as a potential solution to tackling the continuous flow of referrals to the Tamworth service.

This paper discusses the challenges of adapting and implementing this model. Data from the trial period of implementation will be explored and discussed in terms of the benefits and challenges of the model, broader impacts for speech pathology service delivery and the potential application for use across other allied health disciplines.

**The GP Model**

In its original form, this model was designed to meet the needs of all referrals in a more timely manner than could ordinarily be achieved within more traditional service delivery methods.\textsuperscript{19} It was based around the principles of lean theory, where each step of the patient journey had been refined to ensure there was no unnecessary duplication. It was entrenched firmly in family-centred practices where caregivers were actively engaged in their child’s learning and development and supported and empowered to lead the intervention process.\textsuperscript{10,20,21,22} Referrals could be made only by caregivers in order to engage them more effectively from the outset. Missed appointments were managed via a ‘safety net’ system that tracked clients who had not made contact for several months and sent them a letter offering ongoing access or re-entry to the service.\textsuperscript{19} All referrals except those considered ‘high-risk’ (for example, paediatric feeding) were managed via the model. Assessment appointments were offered in blocks of time (usually eight to ten weeks) and once all appointments in a block had been filled, caregivers were asked to call back at the commencement of the following block. No waiting list was maintained. As a new block of time opened, parents could re-contact the service for an assessment appointment.

Clinician diaries had a number of pre-set appointments for both assessment and therapy (based on their full time equivalency) and caregivers were able to select from the available appointment times to suit their needs. Clients attended approximately three therapy appointments following their assessment, or until such time as the caregiver was confident to continue working independently on the current therapy goal. The timing of these appointments was based on the preference of the caregiver, so appointments may have occurred weekly or further apart as required. The need for ongoing intervention was discussed, and caregivers were responsible for initiating future appointments, with no limit on the frequency or number of therapy appointments that could be accessed. Individual therapy was the primary intervention model used, as the system eliminated the need to “manage” large numbers by other models such as group therapy. Group intervention was still used for specific clinical interventions though, for example, social skills training.\textsuperscript{23}

**Local adaptation of the GP Model—ESSENCe**

Careful consideration of the GP Model and its suitability for the Tamworth caseload as well as its alignment with the values of the health service was undertaken in close consultation with TCHS management and speech pathology management within the Health District. The model was branded as Establishing Sustainable Services by Effecting New and Creative Change, or ESSENCe, and support was sought from the Director of Allied Health with Hunter New England Local Health District (HNELHD) to trial this alternate model to caseload management.

In the ESSENCe model the underlying framework remained unchanged. Assessments were offered in eight to nine week blocks of time, no limit was placed on the amount of therapy that could be accessed, and family-centred practice remained at the forefront of all intervention. Most changes were subtle and designed to localise the model. The main alteration was to build in mechanisms to minimise the potential for vulnerable children to fall through the cracks in a parent/caregiver-only referral system.
Under ESSENCe, clinicians could initiate contact with caregivers to receive referrals and make initial assessment appointments.

A key component of the GP Model was for all referrals to be made by caregivers. However, ESSENCe provided an exception for referrals from other service providers. These referrals were still received, but caregivers were notified of the referral via letter and requested to contact the speech pathology department to arrange an assessment appointment. The referral was not placed on a waiting list, and clinicians waited for contact from the caregiver to arrange an assessment.

If the family of the child were identified by the original referrer as unable or unlikely to contact the department to arrange an appointment, the clinician made contact with the family to arrange an assessment appointment. The clinician also initiated contact with caregivers to arrange assessment appointments for all children referred by Out of Home Care (OOHC), a program providing care to children who are unable to live safely at home. Children in OOHC were prioritised for assessment over other referrals as per the NSW Health policy. A common component of both models was that no assessment appointments were booked until verbal contact was made with the primary caregiver(s) of the child.

Under ESSENCe, the ‘safety net’ period was shortened to two months (down from six in the GP Model) of no contact from the caregiver. If no contact was received within two months of the initial referral, the caregiver was sent a ‘safety net’ letter encouraging them to contact the service within two weeks or be discharged. All children who fell within the following categories were placed on the ‘safety net’ list and their caregivers sent a letter encouraging them to re-contact the department to access further intervention if required:

- failure to attend assessment or therapy appointments
- child was accessing therapy, but it had been longer than two months since the caregiver had made a therapy appointment.

The department utilises the Community Health Information Management Enterprise (CHIME) electronic client record system, so staff were legally required to record basic contact and referral details of all clients being referred when caregivers phoned and there were no assessment appointments available. Under the GP Model, the caregiver would be asked to call back at the commencement of the next assessment block and no referral information would be recorded. With the ESSENCe model, basic client information was recorded in CHIME and the client was placed on a ‘safety net’ list in case the caregiver did not call back at the commencement of the next appointment block. If two months lapsed from the initial contact, a letter was generated encouraging the caregiver to arrange an assessment appointment.

**Method**

The nature of the service redesign and subsequent trial paralleled a quality improvement process. The project was designed to trial the new (adapted) model with the caseload of only one clinician in the department for a period of 12 months, thereby freeing other staff to address the outstanding list of referrals. The trial commenced in October 2011, and from this point, all new referrals were managed by the ESSENCe clinician. The approximately 40 pre-existing clients of this clinician continued to be seen by them under the old therapy model until discharged.

All children referred to the department at TCHS from October 2011 were managed using the ESSENCe model. Referrals of an urgent nature were excluded from the trial as were clients eligible for the Child Development Service (those born prematurely or requiring intervention from two or more health disciplines). Referrals for adults and for children seen in outreach sites were also excluded. All referrals excluded from ESSENCe still received a comprehensive service but were managed under existing service models.
Data was collected by the ESSENCe clinician during the trial period via mandatory information recorded in each child’s CHIME record. Data not able to be collected by CHIME was recorded in an Excel spread sheet, which included:

- how quickly the assessment blocks filled up
- the number of referrers asked to re-contact if there were no appointments available in the current block, and of those
- how many actually re-contacted for an initial assessment appointment.

The details of all referrals who were asked to re-contact were retained, and those caregivers who failed to call back in the new block were contacted and offered an appointment. Outcome measures were determined prior to the trial and data was collected on a number of aspects of the model. Several key items are listed below:

- number of referrals
- referral source
- time from initial phone contact to assessment appointment
- time from assessment appointment to first therapy session
- number of “failed to attend” (FTA) appointments
- frequency of therapy appointments per client
- number of Indigenous referrals.

Data was then compared to the overall performance of the department for the twelve months prior to ESSENCe being rolled out. Demographic data and outcome measures data were summarised and reported as counts and proportions. Categorical data, such as diagnosis, referral source and gender, were analysed and reported as percentages. Continuous data were analysed and represented as a mean and range.

**Results**

The service received 388 referrals for the 12 month trial period. Complete data was only available for six months of the trial period resulting in 185 referrals. Referral numbers for the entire service remained steady (slightly increased) at 185 during the trial when compared to the pre-trial data of 178 referrals. The general demographic profile of referrals also remained unchanged when compared to the profile before the introduction of the ESSENCe model. Sixty of the 185 were excluded from the trial as per exclusion criteria, leaving a total of 125 referrals managed through the ESSENCe model.

Of the 125 referrals, 105 were seen for initial assessment as 20 were discharged with no assessment for not responding to ‘safety net’ letters after failing to attend appointments. Of the 105 children assessed, two were discharged immediately as they performed within normal limits. The remaining 103 clients were all offered therapy with 93 clients continuing on to receive therapy (ten clients failed to take up the offer of therapy and were discharged following no response to ‘safety net’ letters).

The first assessment block period during the six month trial ran from 3 October through to 16 December (it was extended to account for closures over Christmas). During this period, 57 referrals were made to the service, with contact received from parents for 50 of these referrals. The assessment block filled up by 18 November, and 16 parents were directed to call back at the beginning of the next block for appointments. Thirteen caregivers called back as requested and the clinician was required to follow-up the remaining three referrals.
Table 1 provides an overview of results against each of the key performance indicators for the trial, and compares to data for the same period 12 months prior. Table 2 shows a comparison of the waiting times before and during the trial.

With the introduction of the new model, the average waiting time for initial assessment was reduced by 80% and the subsequent wait for therapy was reduced by 45%. Despite the initial concerns of management, referral numbers for Indigenous children remained stable as did overall referral numbers to the service. The average wait time from intake to initial assessment was 65 days including outliers. When adjusted for outliers, the average wait time was 34 days.

The average waiting time between the initial assessment and the first therapy appointment was 31 days including outliers. When adjusted for outliers the average waiting time was 29 days.

### Table 1

<table>
<thead>
<tr>
<th>Outcome measure</th>
<th>Pre-ESSENce</th>
<th>ESSENce trial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of referrals</td>
<td>116</td>
<td>125</td>
</tr>
<tr>
<td>Average time from initial phone contact to assessment appointment</td>
<td>326 days</td>
<td>65 days</td>
</tr>
<tr>
<td>Average time from assessment appointment to first therapy session</td>
<td>56 days</td>
<td>31 days</td>
</tr>
<tr>
<td>Frequency of therapy appointments per client</td>
<td>Weekly over 4 weeks</td>
<td>Every 3.4 weeks, no cap</td>
</tr>
<tr>
<td>Number Indigenous clients referred</td>
<td>20</td>
<td>18</td>
</tr>
</tbody>
</table>

*Pre-ESSENCE this was defined as “time from date referral received to date of initial assessment”

## Parent-elected frequency

### Table 2

<table>
<thead>
<tr>
<th>Phase of care</th>
<th>Pre-ESSENce</th>
<th>ESSENce trial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intake to assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>1199–421</td>
<td>1–279</td>
</tr>
<tr>
<td>Median waiting time</td>
<td>331</td>
<td>28</td>
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<tr>
<td>Mean waiting time</td>
<td>326</td>
<td>65</td>
</tr>
<tr>
<td>Assessment to first treatment</td>
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<td></td>
</tr>
<tr>
<td>Range</td>
<td>8–264</td>
<td>1–141</td>
</tr>
<tr>
<td>Median waiting time</td>
<td>21</td>
<td>0**</td>
</tr>
<tr>
<td>Mean waiting time</td>
<td>56</td>
<td>31</td>
</tr>
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</table>

* One child waited only 40 days due to being transferred from another department within the LHD

** Assessment did not take up full time allocation in appointment, so therapy commenced within the session

### Discussion

Providing a high quality, equitable service is the general driving force for many speech pathologists.\(^{24,25}\) ESSENCE provided a means of servicing referrals more equitably through reduced waiting time for both initial assessment and therapy even though referral numbers to the service remained unchanged. Anecdotally, service delivery models are often chosen based on the personal experience of the clinician, but it is rare for these models to remain effective in the presence of reduced staffing and lengthening waiting lists. ESSENCE appealed for its inherent nature as an overall service management model, and its capacity to be adaptable with temporary, unexpected, and even long term changes to staffing levels.
Paper-based waiting lists addressed in order of referral is still the primary method used by paediatric clinicians in public practice in regional NSW. Implementing a model that no longer included this practice was a considerable challenge during the preparation and implementation of the trial. The model needed to ensure that no referral was disadvantaged compared to the previous system and demonstrate that services could potentially improve even with the elimination of a waiting list. Despite the degree of detailed documentation and approval required for instigating extensive changes to service delivery, this careful planning, management support and regular monitoring and review contributed to the success of the trial.

CHIME and Excel presented multiple limitations in the type and accuracy of data collected. This resulted in a considerable amount of incomplete data needing to be removed from the results, thereby shortening the trial period. Even with comprehensive guidelines, some referral scenarios had not been accounted for which delayed the processing of referrals and lengthened the wait time for initial assessment. This highlighted the importance of having clear, detailed service guidelines paired with comprehensive staff training prior to the rollout of substantial service change.

The model achieved its target of reducing the waiting list, but it did so artificially by not keeping a waiting list at all. The data on wait times demonstrated that clients were waiting far less for assessment than under than the previous model; a strong argument for the permanent removal of the previous waiting list system where children had waited anywhere between six and 16 months to access an assessment. The results also advocate for the continued use of the ‘safety net’ system to ensure that clients considered unable or unlikely to initiate contact with the service are given every opportunity to access the service.

The model is not likely to be appropriate for use with all clinical caseloads and contexts. Several key factors contributed to the success experienced in Tamworth, largely that the waiting list had become so unmanageable that an alternative model was warranted to provide more accessible services. Management support was crucial, but easier to obtain given the history of failed attempts to deliver stable, continuous services. Stable staffing was a key factor so that the trial could proceed while other clinicians addressed all outstanding referrals. Clinicians and managers involved in the design were also motivated to trial a system that might reduce waiting times.

Carers’ perception of barriers to accessing paediatric speech pathology services via an Australian parental survey found that 63% of rural parents with a child needing speech pathology had difficulty accessing a service. Solutions to the experienced barriers included: increasing the regularity of speech pathology services, for speech pathologists to be more flexible in their service delivery, and for agent training (i.e. teachers and parents) to occur, all of which are inherent in the ESSENCE model.

Based on its success in Tamworth, several other rural speech pathology departments within HNELHD have successfully adopted components of the model to assist with streamlining and improving the efficiency of their services. The model manages overall service delivery and is not specific to any clinical population. Given this, its application, in part or full, across other single allied health disciplines or multidisciplinary teams may be feasible. ESSENCE is currently being considered by several clinical departments at TCHS.

With one full time equivalent (FTE), the number of initial assessments offered each block would be fewer. However, the psychological impact on clinicians of large workloads and waiting lists that can never be serviced in a timely way cannot be underestimated. Lengthy waiting times to access services can also be stressful for caregivers, who consider even a four to six month wait unacceptable. Interestingly, the original creators of the model reported stable staffing for the five years they have been running their model. It is difficult to attribute this purely to the model, but anecdotally, junior and senior staff believe their ability to assess and treat clients in a timely manner has led to far greater personal and professional satisfaction and encouraged staff to remain in positions. Based on the Tamworth trial and the reported experiences of staff in Albury, the model can be used in any size
department, with the number of assessment and therapy appointments altered to reflect a reasonable workload for the available FTE.

The 'safety net' system is now used across the entire department. It acts as a reminder to clients that the service is still available and accessible. Systems that prompt and remind consumers about services have been well documented and though there is mixed evidence for their effectiveness, they have proven effective in re-engaging clients in their health care in certain contexts. The 'safety net' system also presents an opportunity for 'informed refusal', where clients have the right to refuse any advice given, but the onus is on the clinician to ensure that the refusal is an informed one. It has enabled the cancellation of policies relating to discharge for failing to attend appointments, resulting in a more accessible service.

**Conclusion**

At both a state and national level, continued action is required to improve access to paediatric speech pathology services in rural and remote Australia, as all citizens are entitled to equity of access and this should not be influenced by geography. This may necessitate a focus on incentives to improve recruitment and retention, but should also explore the benefits of service delivery models as approaches to improving service access.

As the model is rolled out for use by all FTE in the department, further attention must be given to data collection tools to ensure they are capable of collecting and reporting on key data. Clinical outcome measurement tools will be incorporated into the care process to assist in assessing the benefits of parent training in combination with intermittent therapy appointments (as required by caregiver) as an intervention method. Ongoing measurement of staff and caregiver satisfaction will also need to be considered.

Developing models and systems to address service needs is complex and time consuming, and may be largely dependent on the local clinical context. While it is acknowledged that the ESSENCe model is not for all clinical settings, it has elements that are transferable to other clinical contexts and disciplines and even to teams that operate as a multidisciplinary unit. It does not have to be implemented as an all or nothing system. As a means of managing the entire caseload, results to date suggest that children receive considerably more timely assessment and intervention under ESSENCe than under the previous system.

**References**


23. Personal communication with Helen Evans, Senior Speech Pathologist, Albury Community Health, July 2012.


