Insulin initiation in general practice: A survey and interview

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Models of care and relational coordination between health professionals involved in insulin initiation for people with type 2 diabetes: An exploratory survey

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Background

- Insulin initiation in general practice for people with T2D is generally not occurring in a timely manner and many PwT2D are referred to specialists
- Delays in insulin initiation may result in adverse patient outcomes
- Changing practice to support increased insulin initiation may require better inter-professional coordination
- Relational coordination theory can be used to explore this
Relational Coordination

Relationships
- Shared goals
- Shared knowledge
- Mutual respect

Communication
- Frequent
- Timely
- Accurate
- Problem solving

Aim

To explore the

- Acceptability of insulin initiation in general practice and
- Existing levels of relational coordination between health professionals involved in this task
Method

• Surveys distributed to a convenience sample of GPs, practice nurses, DNEs and specialist physicians

• Three components:
  – Demographics
  – Models of care
  – Relational coordination
## Models of care

<table>
<thead>
<tr>
<th>Description of model of care</th>
<th>General practice based care</th>
<th>GPwSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiation and management of insulin by GP +/- the assistance of a practice nurse</td>
<td></td>
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</tbody>
</table>

GP that provides a clinical service beyond the scope of conventional general practice and can receive referrals from other GPs

<table>
<thead>
<tr>
<th>Description of model of care</th>
<th>DNE &amp; GP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral to a DNE to initiate and manage insulin in conjunction with a GP</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of model of care</th>
<th>Specialist – shared care +/- DNE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral to a specialist (general physician or endocrinologist +/- DNE) for a one off consultation and provision of a management plan so that the GP can manage insulin</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of model of care</th>
<th>Specialist – outreach +/- DNE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral to a specialist (general physician or endocrinologist +/- DNE) who conducts sessions within a general practice clinic</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Description of model of care</th>
<th>Specialist – routine care +/- DNE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral to a specialist (general physician or endocrinologist +/- DNE) to take on primary responsibility of insulin initiation and ongoing management.</td>
<td></td>
</tr>
</tbody>
</table>
Relational coordination

Relationships
- Shared goals
- Shared knowledge
- Mutual respect

Communication
- Frequent
- Timely
- Accurate
- Problem solving
Relational coordination

**Relationships**
- Shared goals
- Shared knowledge
- Mutual respect

**Communication**
- Frequent
- Timely
- Accurate
- Problem solving

**Shared knowledge**
How much do the care providers in each of these groups know about the work you do with people with type 2 diabetes who are identified as requiring insulin in the general practice setting?

**Problem solving communication**
When problems occur in people with type 2 diabetes who are identified as requiring insulin in the general practice setting, do the care providers in each of these groups blame others or work with you to solve the problem?

Individual, Family, Community.
Method

• Surveys distributed to a convenience sample of GPs, practice nurses, DNEs and specialist physicians

• Three components:
  – Demographics
  – Models of care
  – Relational coordination

• Descriptive statistics and non-parametric tests

• Ethics approval: University of Melbourne HREC 1238199
Results
Participants

• 179 respondents (27 physicians, 63 DNE, 46 GP, 43 PN)

• PNs reported working in their role for a shorter time compared to other health professionals

<table>
<thead>
<tr>
<th></th>
<th>Physician</th>
<th>DNE</th>
<th>GP</th>
<th>PN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in practice median, (IQR)</td>
<td>12.5 (5.5 – 20)</td>
<td>10 (5 – 20)</td>
<td>22 (18 – 30)</td>
<td>5 (3 – 10)</td>
</tr>
</tbody>
</table>

• Majority of respondents were from metropolitan areas (60%)
# Model of care most frequently worked within for initiation of insulin

<table>
<thead>
<tr>
<th>Model of care</th>
<th>Physician (% of group)</th>
<th>DNE (% of group)</th>
<th>GP (% of group)</th>
<th>PN (% of group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General practice based care</td>
<td>3.6</td>
<td>11.3</td>
<td><strong>50</strong></td>
<td><strong>65.1</strong></td>
</tr>
<tr>
<td>GPwSI</td>
<td>0</td>
<td>0</td>
<td>6.8</td>
<td>0</td>
</tr>
<tr>
<td>DNE &amp; GP</td>
<td>7.7</td>
<td><strong>67.7</strong></td>
<td>15.9</td>
<td>23.3</td>
</tr>
<tr>
<td>Specialist – shared care +/- DNE</td>
<td>28.6</td>
<td>1.6</td>
<td>18.2</td>
<td>7.0</td>
</tr>
<tr>
<td>Specialist – outreach +/- DNE</td>
<td>3.6</td>
<td>0</td>
<td>0</td>
<td>4.7</td>
</tr>
<tr>
<td>Specialist – routine care +/- DNE</td>
<td><strong>57.1</strong></td>
<td>19.4</td>
<td>9.1</td>
<td>0</td>
</tr>
</tbody>
</table>
Appropriateness of insulin initiation in general practice

- Physician: 92% Yes, 8% No
- DNE: 71% Yes, 29% No
- GP: 84% Yes, 16% No
- Practice nurse: 93% Yes, 7% No
Relational coordination

- RC reported with physician
- RC reported with DNE
- RC reported with GP
- RC reported with practice nurse
Relational coordination

- Physician
- DNE
- Practice nurse
- GP

Legend:
- RC reported with physician
- RC reported with DNE
- RC reported with GP
- RC reported with practice nurse
Relational coordination

Physician

DNE

Practice nurse

GP

RC reported with physician
RC reported with DNE
RC reported with GP
RC reported with practice nurse
Relational coordination

- RC reported with physician
- RC reported with DNE
- RC reported with GP
- RC reported with practice nurse
Relational coordination

RC reported with physician
RC reported with DNE
RC reported with GP
RC reported with practice nurse
Relational coordination

- RC reported with PNs, DNEs and physicians was impacted by model of care

- The belief that insulin initiation is appropriate impacted on RC domains for GPs and physicians.
Strengths and limitations

• Strengths
  – Use of RC theory to quantify how health professionals communicate and coordinate work around insulin initiation

• Limitations
  – Convenience sample
  – Limited demographic and organisation data
Conclusion

• Insulin initiation in general practice for PwT2D is appropriate

• Relational coordination (RC) between health professionals occurs in silos
  – DNEs may be able to bridge this gap

• If practice nurses are to have an increased role it may be important to address low RC with DNE

• RC provides a useful framework to explore the factors impacting on how health professionals work together and measuring progress in overcoming barriers
Organisational and health professional factors impacting on insulin initiation: An exploratory qualitative study

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Background

- Coordination between primary and secondary care, and doctors and nurses, may be important in achieving increased insulin initiation.
- Relational Coordination (RC) provides a framework for exploring current coordination between these health professionals.
- Survey has indicated differences in RC but only limited insight into why.
Aim

To explore the roles and relationships between the health professionals involved in insulin initiation in order to gain an understanding of factors which may impact on this task being carried out in the general practice setting.
Method

- 21 GPs, PNs, DNEs and specialist physicians were purposively sampled from survey respondents
- Semi-structured interviews were conducted face to face or via telephone
- Transcripts analysed using Framework Analysis in NVivo
- Ethical Approval: University of Melbourne HREC 1238199
Themes
1. Ambiguous roles

DNE108: How long before GPs say “Well okay, we're using the practice nurses to start glargine, why don't they do this and why don't they do that?” Is the aim of this to put CDEs\(^1\) out of a job... that’s our role...to get CDEs into these clinics rather than using practice nurses who have very, very limited education and understanding in that area.

PN415: The general gist is what you get for prac nurses is “When are you going back to real nursing”...Or “You must be really bored, you must not do anything”. People’s perception of practice nurses is you sitting on your backside drinking coffee and doing blood pressures unfortunately.

\(^1\)CDE: credentialled diabetes educator
2. Uncertain competency and capacity

DNE148: But do they have the competence to do [insulin initiation], that’s debatable, and do they understand the mechanisms behind it?

PHY509: I don’t have a problem with it [practice nurses being involved in insulin management]. It’s all a question of training and how it works and... whether they’ve actually got time to spend a lot of time with patients in that sort of context and stuff... I don’t know how - when you’re a practice nurse, how your day gets divided up...Are you supposed to be answering the phone all the time? I mean, if you are, you probably can’t sit down and spend half an hour sitting with a patient.
3. Varying relationships and communication

DNE112: No, I haven’t had the opportunity to do that [meet face to face with the practice nurses]. That's starting to filter a little bit with me going over to one of the Doctors Rooms. There's two main Doctors Rooms in town.

PN415: Because I used to actually go round and meet all my allied health in my area, out of my own time. Meet them and say right how do you want to do this, how do you want to work, and making sure I get my letters back because they know that I do ring them up and go where are my feedback to my letters?
4. Developing trust and respect

**GP730:** The practice nurses that I've worked with have been pretty up to the minute and quite skilled and trustworthy and responsible and happy to report back with problems.

**PN412:** I like [practice nursing], and I think that it's not really recognised that much. As far as when you're a midwife, that's very recognised. It's very recognised within the community, but also amongst your peers as well...Whereas being a practice nurse, it's a step down. It's never said but you can sense it [laughs]. They don't ask you any further questions [laughs].

**DNE148:** You can just support - as a diabetes educator I’m happy just for a practice nurse to ring me up and say look, this, that and the other, what do you reckon? Then it’s a whole team approach. I don’t have the answers, I don’t know the person.
Conclusion

• Role definitions for specialists are agreed but are more contentious for those in primary care, particularly practice nurses
• Lack of knowledge of the practice nurse training and role is a barrier to specialist support for a role in insulin initiation
• Relational coordination is generally stronger within levels of care or where there is co-location
• Personal knowledge of health professionals and their work practices impacts on relationships.
Final Conclusion and Implications for Practice

• Insulin initiation in general practice is generally acceptable, but;

• We may require structures to facilitate RC to make this happen
  – Practice nurse training and roles
  – Co-location
  – DNEs to bridge the gap between silos of care
  – Funding structures

• Potential to improve work satisfaction and benefit patients
Acknowledgements

Quantitative study
• Chris Silagy Research Scholarship, RACGP Foundation
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• Health Professionals who participated in the interviews

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• NHMRC Postgraduate Scholarship
• A/Prof David O’Neal and Prof Elizabeth Patterson

For further information about current studies, including the Stepping Up study:
www.gp.unimelb.edu.au/stepping_up
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