OHTAC Recommendation

Specialized Multidisciplinary Community-Based Care

October 2009
Background

Intermediate care is a community-based specialized multidisciplinary care model that manages chronic illness through formalized links between primary and specialized care. In so doing, it provides a resource to primary care for the treatment of persons with higher acuity of disease, as well as a community-based ‘after hospital discharge’ resource to manage patients with chronic illness.

In late 2008, the Medical Advisory Secretariat, on behalf of the Ontario Health Technology Advisory Committee, selected three disease conditions that could potentially benefit from a specialized multidisciplinary community-based model of care and improve patient care in Ontario. The three conditions, heart failure, type 2 diabetes, and chronic wounds, were selected based on a comparison of:

- chronic disease prevalence in Ontario and an examination of the burden of illness,
- their health system impact,
- the existence of disease- and Ontario-specific economic models, and
- whether or not MAS had previously carried out an evidence based analysis of the conditions.

While the evidence indicates that patients with high acuity chronic illnesses, particularly those with chronic heart disease, diabetes, or wounds, would benefit from multi-disciplinary care, this review examined which specific mix of multi-disciplinary care could best perform the roles identified above.

The review of specialized multidisciplinary community-based care for persons with heart failure posed the research question: “What are the patient and system levels of effectiveness and cost-effectiveness of intermediate care for the management of heart failure?”

The review of specialized multidisciplinary community-based care for patients with type 2 diabetes posed the research question “What is the effectiveness of intermediate care for the management of type 2 diabetes on HbA1C or blood pressure”.

The review of specialized multidisciplinary community-based care for chronic wound management posed the research question “what are the effectiveness and cost effectiveness of a community-based multidisciplinary wound care team, compared to non-team care, for the management of chronic wounds?”

OHTAC Findings:

The evidence review of multidisciplinary care for heart failure patients showed significant reduction in all-cause mortality and hospitalization rates. The economic analysis projected a potential reduction in hospitalization costs of $67M per year in Ontario alone, favouring the use of multidisciplinary care.

The evidence review of multi-disciplinary care for the management of type 2 diabetes indicated a clinically significant reduction in HbA1C and systolic blood pressure for patients receiving care from multi-disciplinary team comprised of either a registered nurse, registered dietician, and physician or a pharmacist and physician. The generalizability of a pharmacist/physician team to the Ontario context is, however, unknown.

The evidence review of multi-disciplinary care for patients with chronic wounds showed that a multidisciplinary wound care team significantly increase the rate of wound healing and reduces the severity of wound-associated pain, as well as the number of required daily treatments, compared to persons not managed by a wound care team. The quality of evidence supporting these outcomes is low to
OHTAC Recommendation: Specialized Multidisciplinary Community-Based Care

very low, meaning that further research could have an important impact on these findings and their projected magnitude of effect.

OHTAC Recommends:

- For both heart failure and type 2 diabetes, it is recommended that Ontario continue to:
  - Support and expand access to specialized multi-disciplinary community-based care provided by a core team. For diabetes, this team should consist of at least a registered nurse, registered dietician and a physician (primary care physician and/or specialist) and should use behavioural interventions as part of patient management. For heart failure, this should consist of a registered nurse and a physician, at least one of whom should be specialised in the management of patients with heart failure
  - Examine the effectiveness and generalizability to Ontario of a pharmacist as part of the diabetes multi-disciplinary team.
  - Support fair and equal access to these interventions across cultures and geographical location.

- OHTAC recommends that existing models of intermediate care in Ontario for type 2 diabetes, heart failure and chronic wounds be evaluated and a field evaluation be undertaken to determine which models:
  - Optimize patient outcomes & community-based care through interactions with primary and hospital care
  - Result in the appropriate referrals from primary and hospital care to maximize primary care involvement and skill set development
  - Are most feasible with regards to cost & appropriate use of healthcare providers
  - Are most cost-effective
  - Are most likely to reduce the cost of service delivery

- Field evaluations exploring the above should build on existing infrastructures and investments already supported by the MOHLTC wherever possible, and include identification of best practice.

- Given Ontario’s existing investment in several different models of primary care delivery that include different combinations of health practitioners, OHTAC recommends that a common repository of data be set up to examine the outcomes from existing government sponsored approaches. In particular, relationships between family practices and specialty services should be explored in order to identify replicable models that optimize patient outcomes and system efficiencies.

- OHTAC recommends that any future initiatives involving the provision of multidisciplinary care for chronic disease management should include a rigorous and consistent evaluation method with common outcomes within a pre-determined review period, the results of are to be made public.
Field Evaluation Advice

OHTAC issues the following advice with regard to the objectives of any forthcoming field evaluation studies:

- Study objectives are to include:
  - The comparative effectiveness and cost effectiveness of IC services compared to the absence of these services for the management of heart failure, diabetes and chronic wound care.
  - The monitoring of referral patterns from primary care and hospitals to and from intermediate care services for these conditions.
  - The use of patient level, system level, and cost effectiveness outcome measures for each of these conditions.

- Study specific outcomes of intermediate care for type 2 diabetes should examine changes in the following parameters as set out in the Diabetes Task Force Report (2004) and modified by an expert panel:
  - Glycemic, blood pressure and lipid control
  - Compliance with treatment and lifestyle goals
  - Retinal, foot and renal assessments

- Study specific outcomes for heart failure will be determined by an expert panel and consist of changes in both patient and system level parameters including:
  - Quality of Life
  - Mortality rates
  - ADL and IDL
  - Medication Compliance
  - ER visits
  - Hospital admission rates
  - Hospital bed utilization

- Study specific outcomes for chronic wound care will be determined by an expert panel and consist of changes in both patient and system level parameters including:
  - Disease-specific patient outcome
    (e.g. amputation, wound healing, and pain management)
  - Mortality rates
  - Emergency room visits
  - Hospitalizations
  - Hospital discharge
  - Admission to long-term care
  - Impact on community-based health care resources