STRATEGIES THAT WORK IN EARLY PALLIATION OF CHRONIC DISEASE
Tara Lohmann MD FRCPC, Respirologist
Jessica Simon MB ChB FRCPC, Palliative Care
Michael Slawnych MD FRCPC, Cardiologist
Chandra Thomas MSc MD FRCPC, Nephrologist
Faculty/Presenter Disclosure

Faculty: Dr. Michael Slawnych

Relationships with financial sponsors:
- Grants/Research Support: None
- Speakers Bureau/Honoraria: Novartis: speaker fees for talk on palliative cardiology
- Consulting Fees: None
- Patents: None
- Other: Work for University of Calgary and Alberta Health Services
Faculty/Presenter Disclosure

• Faculty: Tara Lohmann

• Relationships with financial sponsors:
  – Grants/Research Support: None
  – Speakers Bureau/Honoraria: None
  – Consulting Fees: None
  – Patents: None
  – Other: Work for University of Calgary and Alberta Health Services
Faculty/Presenter Disclosure

- Faculty: Jessica Simon
- Relationships with financial sponsors:
  - Grants/Research Support: CIHR, Alberta Innovates, Canadian Frailty Network
  - Speakers Bureau/Honoraria: None
  - Consulting Fees: None
  - Patents: None
  - Other: Alberta Health Services (physician consultant ACP, GCD, AHS Calgary Zone)
Faculty/Presenter Disclosure

- Faculty: Chandra Thomas
  - Grants/Research Support: None
  - Speakers Bureau/Honoraria: None
  - Consulting Fees: None
  - Patents: None
  - Other: Work for University of Calgary and AHS
Disclosure of Financial Support

- This program has NOT received financial support
- This program has NOT received in-kind support from

- Potential for conflict(s) of interest:
  - NONE
Mitigating Potential Bias

- This talk will not include any discussion of drugs/therapies related Novartis.
Workshop Objectives

■ Employ strategies to overcome barriers in providing a palliative care approach.

■ Recognize the impact of prognostic uncertainty in delaying the provision of palliative care.

■ Apply a rational approach to deprescribing medications and advanced interventions in persons with chronic disease in the last years of life.
What is the palliative care that you do in your practice?

Patient Goals
Get back to painting landscapes.

What are hoping to take away from today?
I consult the palliative care service:

- Never
- Rarely
- Sometimes
- Often
- Always
Why would/wouldn’t you consult the palliative care service?
Some definitions

- Palliative care
- Palliative approach to care
- Hospice care
151 Patients with newly diagnosed with metastatic NSCL cancer randomized to early integrated palliative care (PC) vs standard oncologic treatment

- PC group had better quality of life (FACT-L, HADS), fewer patients had depressive symptoms (16% vs 38%)

- Fewer patients in the PC group had aggressive end-of-life care, yet median survival was longer (11.6 vs 8.9 months)

Temel JS et al. NEJM 2010; 363: 733-42
What is a palliative approach to care?

- Illness comprehension and coping
- Symptoms and functional status
- Advance Care Planning and shared decision making
- Coordination of care

Adapted from Temel et al., 2010; Boucher et al., 2018
Barriers to palliative care in non-cancer disease

- Patient/Carer factors
- Physician & HCP factors
- Illness factors
- System factors
Based on the definition of a palliative care approach, does this reframe your role in the palliative care of your patients?
What is the evidence for a palliative approach to care in non-cancer?
An integrated palliative and respiratory care service for patients with advanced disease and refractory breathlessness: a randomised controlled trial

Irene J Higginson, Claudia Bausewein, Charles C Reilly, Wei Gao, Marjolein Gysels, Mendwas Dzingina, Paul McCrone, Sara Booth, Caroline J Jolley, John Moxham

- Improved breathlessness mastery (CRQ) in the intervention group vs. control
- Pre-post analysis: intervention group had improved quality of life, dyspnea, mastery, POS at 6 weeks.
- Survival benefit in the intervention group

INSPIRED COPD Outreach Program™

Home-based COPD program designed to ease transitions from hospital to community

**TABLE 2. Six- and 12-months results pre/post-INSPIRED for ED visits, hospital admissions and length of stay (LOS) (n=93)***

<table>
<thead>
<tr>
<th></th>
<th>Pre-INSPIRED</th>
<th>Post-INSPIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12 months total</td>
<td>6-12 months</td>
</tr>
<tr>
<td>ED visits</td>
<td>266</td>
<td>71</td>
</tr>
<tr>
<td>Admissions</td>
<td>136</td>
<td>21</td>
</tr>
<tr>
<td>LOS (days)</td>
<td>1333</td>
<td>202</td>
</tr>
</tbody>
</table>

*To provide a homogeneous group for this analysis we excluded patients who did not see the spiritual care practitioner, did not have an ED visit or admission in the year prior to INSPIRED, those who died, or went to a nursing home or long-term care facility within 6-months of starting INSPIRED, and those who live outside the catchment.
Why? Early conversations about patient values and goals linked to better serious illness care

- Increased goal-concordant care
- Improved quality of life / patient well-being
- Fewer hospitalizations
- More and earlier palliative/hospice care
- Better patient and family coping

Mack JCO 2010; Wright JAMA 2008; Chiarchiaro AATS 2015; Detering BMJ 2010; Zhang Annals 2009
What matters most to seriously ill patients?

<table>
<thead>
<tr>
<th>Rank</th>
<th>How important is it ...</th>
<th>Rating: no. (%) of patients; n = 434</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Not at all</td>
</tr>
<tr>
<td>1</td>
<td>To have trust and confidence in the doctors looking after you</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Not to be kept alive on life support when there is little hope for a meaningful recovery</td>
<td>15 (3.6)</td>
</tr>
<tr>
<td>3</td>
<td>That information about your disease be communicated to you by your doctor in an honest manner</td>
<td>2 (0.5)</td>
</tr>
<tr>
<td>4</td>
<td>To complete things and prepare for life’s end (life review, resolving conflicts, saying goodbye)</td>
<td>4 (0.9)</td>
</tr>
<tr>
<td>5</td>
<td>To not be a physical or emotional burden on your family</td>
<td>2 (0.5)</td>
</tr>
<tr>
<td>6</td>
<td>Upon discharge from hospital, to have an adequate plan of care and health services available to look after you at home</td>
<td>8 (1.9)</td>
</tr>
</tbody>
</table>

Heyland 2006 CMAJ
8. Don’t undertake prolonged life-sustaining treatments or escalate to intensive care without establishing prognosis, preferences and goals of care.
Who has heard of the Serious Illness Conversation Care Program?

“There's no easy way I can tell you this, so I'm sending you to someone who can.”
A tool you can use:
The Serious Illness Care Program

The Serious Illness Care Program improves the lives of people with serious illness by increasing meaningful conversations with their clinicians about their values and priorities.
https://www.youtube.com/watch?v=45b2QZxDd_o

Atul Gawande Video
Serious Illness Care Program Components

**Tools**
- Serious Illness Conversation Guide
- Clinician Reference Guide
- Patient preparation materials
- Family Comm. Guide

**Education**
- Train Clinicians
  - 2.5-hour clinician training sessions

**Systems Change**
- Patient Screening → Reminder System → Conversation using the Guide → Documentation template in EMR → Patient & Family Resources

**Measurement and Improvement (QI)**
Why?
BEFORE TAKEOFF

- Parking Brakes: SET
- Flight Controls: FREE & CORRECT
- Flight Instruments: SET
- Fuel Selector: BOTH
- Elevator & Rudder Trim: SET
- Mixture: RICH FOR RUNUP
- Autopilot: CHECK DISCONNECT
- Throttle: 1800 RPM
- Ammeter: CHECK
- Engine Instruments: CHECK
- Suction: CHECK
- Magnetos: CHECK (125/50)
- Throttle: IDLE CHECK
  SMOOTH & 600 RPM ± 25 THEN 1000 RPM
- Radios: SET
- Brakes: RELEASE

Final Items

- Door/Windows: CLOSED
- Flaps: AS REQUIRED
- Mixture: RICH (BELOW 3000 FT)
What do checklists or guides do?

- Bridge gap between evidence and “real world” implementation
- Assure adherence to key processes
- Achieve higher level of baseline performance
- Ensure completion of necessary tasks during complex, stressful situations
So what is the guide?

Checklist + Language + Process

Clinician Steps
- Prompts essential steps
- Intentional sequence

Conversation Guide
- Critical topics
- Proven language

... embedded in a Process that includes cuing and documenting
## Serious Illness Conversation Guide

<table>
<thead>
<tr>
<th><strong>CONVERSATION FLOW</strong></th>
<th><strong>PATIENT-TESTED LANGUAGE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Set up the conversation</strong></td>
<td>“I'd like to talk about what is ahead with your illness and do some thinking in advance about what is important to you so that I can make sure we provide you with the care you want — is this okay?”</td>
</tr>
<tr>
<td>• Introduce purpose</td>
<td></td>
</tr>
<tr>
<td>• Prepare for future decisions</td>
<td></td>
</tr>
<tr>
<td>• Ask permission</td>
<td></td>
</tr>
<tr>
<td><strong>2. Access understanding and preferences</strong></td>
<td>“What is your understanding now of where you are with your illness?”</td>
</tr>
<tr>
<td></td>
<td>“How much information about what is likely to be ahead with your illness would you like from me?”</td>
</tr>
<tr>
<td><strong>3. Share prognosis</strong></td>
<td>“I want to share with you my understanding of where things are with your illness…”</td>
</tr>
<tr>
<td>• Share prognosis</td>
<td></td>
</tr>
<tr>
<td>• Frame as a “wish…worry”, “hope…worry” statement</td>
<td><em>Uncertain:</em> “It can be difficult to predict what will happen with your illness. I hope you will continue to live well for a long time but I'm worried that you could get sick quickly, and I think it is important to prepare for that possibility.” OR <em>Time:</em> “I wish we were not in this situation, but I am worried that time may be as short as ___ (express as a range, e.g. days to weeks, weeks to months, months to a year).” OR <em>Function:</em> “I hope that this is not the case, but I'm worried that this may be as strong as you will feel, and things are likely to get more difficult.”</td>
</tr>
<tr>
<td>• Allow silence, explore emotion</td>
<td></td>
</tr>
<tr>
<td><strong>4. Explore key topics</strong></td>
<td>“What are your most important goals if your health situation worsens?”</td>
</tr>
<tr>
<td>• Goals</td>
<td>“What are your biggest fears and worries about the future with your health?”</td>
</tr>
<tr>
<td>• Fears and worries</td>
<td>“What gives you strength as you think about the future with your illness?”</td>
</tr>
<tr>
<td>• Sources of strength</td>
<td>“What abilities are so critical to your life that you can't imagine living without them?”</td>
</tr>
<tr>
<td>• Critical abilities</td>
<td>“If you become sicker, how much are you willing to go through for the possibility of gaining more time?”</td>
</tr>
<tr>
<td>• Tradeoffs</td>
<td>“How much does your family know about your priorities and wishes?”</td>
</tr>
<tr>
<td>• Family</td>
<td></td>
</tr>
<tr>
<td><strong>5. Close the conversation</strong></td>
<td>“I've heard you say that ___ is really important to you. Keeping that in mind, and what we know about your illness, I recommend that we ___ This will help us make sure that your treatment plans reflect what’s important to you.”</td>
</tr>
<tr>
<td>• Summarize</td>
<td>“How does this plan seem to you?”</td>
</tr>
<tr>
<td>• Make a recommendation</td>
<td>“I will do everything I can to help you through this.”</td>
</tr>
<tr>
<td>• Check in with patient</td>
<td></td>
</tr>
<tr>
<td>• Affirm commitment</td>
<td></td>
</tr>
<tr>
<td><strong>6. Document your conversation</strong></td>
<td></td>
</tr>
<tr>
<td><strong>7. Communicate with key clinicians</strong></td>
<td></td>
</tr>
</tbody>
</table>
Implementation Roadmap
Serious Illness Care Program

**Phase One: Build Foundation**
- Convene an Exploratory Committee
- Assess Readiness
- Engage Leaders and Colleagues
- Determine Program Goals
- Recruit Implementation Team
- Select Pilot Sites
- Create Incentives for Program Use
- Construct Budget and Obtain Approval

**Phase Two: Plan Implementation**
- Plan Outreach and Communication Strategy
- Develop a Training Plan for Frontline Clinicians
- Recruit Trainers
- Modify the EHR
- Plan for Performance Improvement
- Prepare for Quality Control
- Prepare for Monitoring and Evaluation
- Customize Clinic Workflow for Conversation

**Phase Three: Launch and Evaluate Pilot Sites**
- Begin Clinician Training
- Implement Clinic Workflow
- Refine Clinician Training and Workflow
- Monitor and Improve Implementation
- Evaluate Outcomes and Synthesize Lessons Learned
- Promote the Program

**Phase Four: Expand and Sustain**
- Assess Readiness to Expand
- Create a Plan for Program Expansion
- Develop Strategies for Sustaining the Work
- Reflect and Share

Clinician training begins here.
Out-patient Process

1. Clinicians Select Patients (Prognosis < 1 yr)
2. Clinician Training (Serious Illness Conversation Guide)
3. Clinician Prompt (Email, Guide)
4. Patient Prepared for Conversation
5. Clinician and Patient have Conversation
6. Document in EMR
7. Family Communication Guide
Nurse Champion screens handover report (>5 days, >65 yrs)

Nurse Champion flags 1-2 patients per meeting and raises these at handover

MD decides if patient is appropriate or identifies other patients

Yes

At Bullet Rounds Nurse Clinician identifies staff member to set up family meeting

No

Staff member prepares patient and asks who else should be at the meeting (checks if green sleeve in hospital) gives info letter

Pt agrees to meeting

Yes

MD informed

No

Pt confirms TR

Yes

MD hands it to unit clerk

No

Bedside nurse follows up with pt about conversation

On Discharge:
1. Bedside Nurse checks latest TR and GCD in green sleeve
2. Instructs pt on how to use green sleeve and sends it home with pt

Unit clerk puts TR in Green sleeve

MD gets conversation materials and handouts from designated location

Day of conversation:
1. Charge nurse cues MD of meeting
2. Pages MD if late/no show

Staff member sets up meeting (room/translator etc):
1. Makes appt in SCM
2. Pages MD to confirm

MD: 1. Documents on TR and prints
2. Shows TR to patient

Pt confirms TR

MD:
1. Documents on TR and prints
2. Shows TR to patient

Unit clerk puts TR in Green sleeve

Bedside nurse follows up with pt about conversation

On Discharge:
1. Bedside Nurse checks latest TR and GCD in green sleeve
2. Instructs pt on how to use green sleeve and sends it home with pt

Yes

No
How to bridge the gap between what patients want and what they get?

Ask patients about their values and priorities and write it down.
PAUSE
Rationalizing medications and investigations
You have had a serious illness care conversation with Dorothy

**Illness Understanding:** last year of life, deteriorating health

**Goals:** Remaining in her home as long as possible

**Worries:** Taking so many pills, not afraid to die, hopes to die in her sleep

**Sources of strength:** Her faith

**Critical abilities:** Eating and talking

**Tradeoffs:** Does not want “heroics” or prolonged hospital stays, would rather allow natural death at that time

**Family:** Is wondering about asking her homecare companion to be her agent
Dorothy’s meds…

- Tiotropium
- Salbutamol
- Budesonide/Formoterol
- Acetaminophen SR 650mg tid
- Morphine IR 10 mg qid prn
- Gabapentin 300 mg at bedtime
- Docusate 100 mg po daily
- Senna 8.6-17.2mg as needed
- Omeprazole 30 mg bid
- Glargine insulin 25 units at bedtime
- Humulin R 8-12 units bid qAM & qSupper
- Levothyroxine 88 mcg daily
- Amlodipine 10 mg daily
- Furosemide 80 mg bid
- Carvedilol 25 mg bid

- Ramipril 10 mg bid
- Nitro patch 0.6 mg/h on during the day
- Atorvastatin 20 mg daily at bedtime
- Amiodarone 200 mg p.o. once daily
- Warfarin 2mg alternating with 3mg daily
- Vitamin D3 2000 units daily
- Calcium carbonate 1250mg tid
- Darbepoeitin 40 mcg sc every 2 weeks
- Ferrous Fumarate 300 mg bid
- Escitalopram 20 mg p.o. once daily
- Duloxetine 60 mg p.o. once daily
- Zopiclone 7.5 mg daily at bedtime
- Trazodone 400 mg p.o. once daily
- Melatonin 5 mg p.o. at bedtime
Mild cognitive impairment
HFrEF, Prior MI, CABG, ICD, Afib on anticoagulation
CKD with an eGFR of 12ml/min
COPD
GERD
DM2 on insulin
Remote colon cancer treated surgically
Osteoarthritis, Chronic pain
How Many Prescription Medications are Canadian Seniors Taking?
2 out of 3 Canadians over the age of 65 take at least 5 different prescription medications.

1 out of 4 Canadians over the age of 65 take at least 10 different prescription medications.

Seniors taking ≥10 medications
- 20% of seniors age 65 to 74
- 32% of seniors age 75 to 84
- 39% of seniors age 85+

Canadian Institute for Health Information - 2014

Polypharmacy Over the Course of the Last 12 Months of Life of Older People in Sweden, by Living Arrangement

Morin et al. 2017
Dr. Philippe Pinel, French Physician and Psychiatrist (1745-1826)

"Dr. Pinel ordering the removal of chains from patients at the Paris Asylum for insane women (1795 Painting by Tony Robert-Fleury)"
“It is an art of no little importance to administer medicines properly; but it is an art of much greater and more difficult acquisition to know when to suspend or altogether omit them.”
Society Guidelines

2017 Comprehensive Update of the Canadian Cardiovascular Society Guidelines for the Management of Heart Failure

Primary Panel: Justin A. Ezekowitz, MBCh (Chair), a Eileen O’Meara, MD (Co-chair), b Michael A. McDonald, MD, c Howard Abrams, MD, c Michael Chan, MBBS, d Anique Ducharme, MD, b Nadia Giannetti, MD, e Adam Grzeslo, MD, f Peter G. Hamilton, MBCh, a George A. Heckman, MD, g Jonathan G. Howlett, MD, h Sheri L. Koshman, Pharm D, a Serge Lepage, MD, i Robert S. McKelvie, MD, j Gordon W. Moe, MD, k Miroslaw Rajda, MD, l Elizabeth Swiggum, MD, m Sean A. Virani, MD, n Shelley Zieroth, MD, o Secondary Panel: Abdul Al-Hesayen, MD, k Alain Cohen-Solal, MD, p Michel D’Aoust, MD, q Sabe De, MD, j Estrellita Estrella-Holder, RN, o Stephen Frenses, MD, r Lee Green, MD, a Haissam Haddad, MD, s Karen Harkness, RN, f Adrian F. Hernandez, MD, t Simon Kouz, MD, u Marie-Hélène LeBlanc, MD, v Frederick A. Masoudi, MD, w Heather J. Ross, MD, c André Roussin, MD, x and Bruce Sussex, MBBS y

a University of Alberta, Edmonton, Alberta, Canada; b Institut de Cardiologie de Montréal, Université de Montréal, Montréal, Québec, Canada; c University Health Network, Toronto, Ontario, Canada; d Edmonton Cardiology Consultants, Edmonton, Alberta, Canada; e McGill University, Montréal, Québec, Canada; f Hamilton Health Sciences, McMaster University, Hamilton, Ontario, Canada; g University of Waterloo, Waterloo, Ontario, Canada; h University of Calgary, Calgary, Alberta, Canada; i Université de Sherbrooke, Sherbrooke, Québec, Canada; j London Health Sciences Centre, Western University, London, Ontario, Canada; k St Michael’s Hospital, Toronto, Ontario, Canada; l QEII Health Sciences Centre, Halifax, Nova Scotia, Canada; m Royal Jubilee Hospital, Victoria, British Columbia, Canada; n University of British Columbia, Vancouver, British Columbia, Canada; o St Boniface General Hospital, Winnipeg, Manitoba, Canada; p Hôpital Lariboisière, Paris, France; q Université du Montréal, Montréal, New Brunswick, Canada; r Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada; s University of Saskatchewan, Saskatoon, Saskatchewan, Canada; t Duke Clinical Research Institute, Durham, North Carolina, USA; u Centre Hospitalier Régional de Lanaudière, Joliette, Québec, Canada; v Hôpital Laval, Université Laval, Québec, Québec, Canada; w University of Colorado, Aurora, Colorado, USA; x Centre hospitalier de l’Université de Montréal, Montréal, Québec, Canada; y Memorial University, St John’s, Newfoundland, Canada.
8. Community Management of HF

The management of HF should be delivered within an integrated system of care on the basis of chronic disease management and prevention principles. This system must meet and anticipate the evolving goals and complexity of aging patients throughout their entire journey with HF, and provide access to specialized services, community supports, and end of life care according to patient needs and preferences.

8.1. Patient-level considerations

Clinical complexity, cognitive impairment, and frailty. Aging patients with HF often develop additional medical and psychiatric comorbidities, geriatric syndromes, and associated symptoms. Cognitive impairment, which is more common among patients with HF, is associated with impaired self-care capacity and greater risks of functional decline, rehospitalization, and mortality. Similarly, frailty affects up to 50% of older patients with HF, in whom it is associated with nonspecific clinical features, acute care utilization, poor quality of life, worse outcomes from concomitant conditions, and mortality.

Recommendations regarding HF therapy apply to older patients and should not be restricted on the basis of age alone. Frail patients are vulnerable to side effects due to the polypharmacy inherent to the treatment of HF and other comorbidities. To avoid side effects such as falls, care must be taken when optimizing medications toward target doses. Orthostatic hypotension is frequent among frail older patients, but if recognized, can be managed to allow for greater use of evidence-based HF therapies.

Frailty has important ramifications on the organization of HF care. It is central to defining patient goals and thus to decision-making related to ACP, surgical treatments, implantable device therapy, medication deprescribing, or other treatments not compatible with these goals. Frailty is more common with age, but can occur in persons who are relatively young.
8. Community Management of HF

The management of HF should be delivered within an integrated system of care on the basis of chronic disease management and prevention principles. This system must meet and anticipate the evolving goals and complexity of aging patients throughout their entire journey with HF, and provide access to specialized services, community supports, and end of life care according to patient needs and preferences.

8.1. Patient-level considerations

Clinical complexity, cognitive impairment, and frailty.
Aging patients with HF often develop additional medical and psychiatric comorbidities, geriatric syndromes, and associated symptoms. Cognitive impairment, which is more common among patients with HF, is associated with impaired self-care capacity and greater risks of functional decline, hospitalization, and mortality. Similarly, frailty affects up to 50% of older patients with HF, in whom it is associated with nonspecific clinical features, acute care utilization, poor quality of life, worse outcomes from concomitant conditions, and mortality.

Recommendations regarding HF therapy apply to older patients and should not be restricted on the basis of age alone. Frail patients are vulnerable to side effects due to the polypharmacy inherent to the treatment of HF and other comorbidities. To avoid side effects such as falls, care must be taken when optimizing medications toward target doses. Orthostatic hypotension is frequent among frail older patients, but if recognized, can be managed to allow for greater use of evidence-based HF therapies.

Frailty has important ramifications on the organization of HF care. It is central to defining patient goals and thus to decision-making related to ACP, surgical treatments, implantable device therapy, medication de-prescribing, or other treatments not compatible with these goals. Frailty is more common with age, but can occur in persons who are relatively young and previously healthy.

RECOMMENDATION

168. We recommend that patients with known or suspected HF should be assessed for multimorbidity, frailty, cognitive impairment, dementia, and depression, all of which might affect treatment, adherence to therapy, follow-up, or prognosis (Strong Recommendation; High-Quality Evidence).

Practical tip. Depression in older patients with HF should be suspected when chronic physical complaints persist despite optimal HF therapy.

Practical tip. Measuring orthostatic vital signs might identify individuals at risk of falls.

Practical tip. Manage fall risk related to orthostatic hypotension:
- Minimize use of diuretics and other vasodilators by optimizing first-line HF therapy;
- Consider a medication review with a pharmacist; and
- Promote physical activity, which might reduce the risk of orthostatic hypotension.

Practical tip. Screening, prevention, and management of delirium is a standard of care for all acutely ill older patients, including those with HF.

Practical tip. Cognitive impairment, even when mild, might interfere with HF self-care.

Practical tip. Patients older than the age of 65 years with HF should be screened for cognitive impairment.

Practical tip. If cognitive impairment is identified, a capable substitute decision-maker should be designated.

Practical tip. HF therapies in frail or older patients should be similar to those in younger patients.

Practical tip. In frail older patients, HF medications may be introduced at lower doses and titrated more slowly.

Practical tip. Clinicians should be alert for drug-drug, drug-disease, and drug-food interactions.
Appropriate polypharmacy
Medications are prescribed according to best evidence and their use has been optimised.

Problematic polypharmacy
The prescribing of multiple medications where the intended benefit of the medications are not realised.

https://www.nice.org.uk/advice/ktt16
Clinical Assessment and Management of Multimorbidity: NICE guideline

1. **Identification**
   - *Patients with multi-morbidity* are identified by their GP practice

2. **Assessing Values, Priorities and Goals**
   - *Patients with an individualized management plan for multi-morbidity* are given opportunities to discuss their values, priorities and goals

3. **Coordination of Care**
   - *Patients get an individualized management plan and know who is responsible for coordinating their care*

4. **Reviewing Medicines and Other Treatments**
   - *discuss whether medicines and other treatments can be stopped or changed*

*more than 1 long-term health condition*
Statins ...
Statins for primary prevention of cardiovascular events and mortality in old and very old adults with and without type 2 diabetes: retrospective cohort study

Rafael Ramos,1,4 Marc Comas-Cufí,1,2 Ruth Martí-Lluch,1,3 Elisabeth Balló,1,4 Anna Ponjoan,1,3 Lia Alves-Cabreros,1,2 Jordi Blanch,1,2 Jaume Marrugat,5,6 Roberto Elosua,5,6 María Grau,5,6 Marc Elosua-Bayes,1,2 Luis García-Ortiz,1 María García-Gil1,4

ABSTRACT

OBJECTIVE
To assess whether statin treatment is associated with a reduction in atherosclerotic cardiovascular disease (CVD) and mortality in old and very old adults with and without diabetes.

DESIGN
Retrospective cohort study.

SETTING
Database of the Catalan primary care system (SIDIAP), Spain, 2006-15.

PARTICIPANTS
46,864 people aged 75 years or more without clinically recognised atherosclerotic CVD. Participants were stratified by presence of type 2 diabetes mellitus and as statin non-users or new users.

MAIN OUTCOME MEASURES
Incidence of atherosclerotic CVD and all-cause mortality compared using Cox proportional hazards modelling, adjusted by the propensity score of statin treatment. The relation of age with the effect of statins was assessed using both a categorical approach, stratifying the analysis by old (75-84 years) and very old (≥85 years) age groups, and a continuous analysis, using an additive Cox proportional hazard model.

RESULTS
The cohort included 46,864 participants (mean age 77 years; 63% women; median follow-up 5.6 years). In participants without diabetes, the hazard ratios for statin use in 75-84 year olds were 0.94 (95% confidence interval 0.86 to 1.04) for atherosclerotic CVD and 0.98 (0.91 to 1.05) for all cause mortality, and in those aged 85 and older were 0.93 (0.82 to 1.06) and 0.97 (0.90 to 1.05), respectively. In participants with diabetes, the hazard ratio of statin use in 75-84 year olds was 0.76 (0.65 to 0.89) for atherosclerotic CVD and 0.84 (0.75 to 0.94) for all cause mortality, and in those aged 85 and older were 0.82 (0.53 to 1.26) and 1.05 (0.86 to 1.28), respectively. Similarly, effect analysis of age in a continuous scale, using splines, corroborated the lack of beneficial statins effect for atherosclerotic CVD and all cause mortality in participants without diabetes older than 74 years. In participants with diabetes, statins showed a protective effect against atherosclerotic CVD and all cause mortality; this effect was substantially reduced beyond the age of 85 years and disappeared in nonagenarians.

CONCLUSIONS
In participants older than 74 years without type 2 diabetes, statin treatment was not associated with a reduction in atherosclerotic CVD or in all cause mortality, even when the incidence of atherosclerotic CVD was statistically significantly higher than the risk thresholds proposed for statin use. In the presence of diabetes, statin use was statistically significantly associated with reductions in the incidence of atherosclerotic CVD and in all cause mortality. This effect decreased after age 85 years and disappeared in nonagenarians.
In both old (75–84 years) and very old (85+) people without diabetes, taking statins was not associated with a lower risk for CVD or all-cause mortality.

Among those with diabetes, statin use was associated with lower CVD risk (hazard ratio, 0.76) and all-cause mortality (0.84) in the 75–84 age group; the protective effect was not apparent among the very old.
Safety and Benefit of Discontinuing Statin Therapy in the Setting of Advanced, Life-Limiting Illness: A Randomized Clinical Trial

Jean S. Kutner, MD, MSPH; Patrick J. Blatchford, PhD; Donald H. Taylor Jr, PhD; Christine S. Ritchie, MD; Janet H. Bull, MD; Diane L. Fairclough, DrPH; Laura C. Hanson, MD; Thomas W. LeBlanc, MD; Greg P. Samsa, PhD; Steven Wolf, MS; Noreen M. Aziz, MD, PhD; David C. Currow, BMed; Betty Ferrell, PhD; Nina Wagner-Johnston, MD; S. Yousuf Zafar, MD; James F. Cleary, MD; Sandesh Dev, MD; Patricia S. Goode, MD; Arif H. Kamal, MD; Cordt Kassner, PhD; Elizabeth A. Kvale, MD; Janelle G. McCallum, RN, MSN; Adeboye B. Ogunsenitan, MD; Steven Z. Pantilat, MD; Russell K. Portenoy, MD; Maryjo Prince-Paul, PhD; Jeff A. Sloan, PhD; Keith M. Swetz, MD; Charles F. Von Gunten, MD, PhD; Amy P. Abernethy, MD, PhD

**Importance** For patients with limited prognosis, some medication risks may outweigh the benefits, particularly when benefits take years to accrue; statins are one example. Data are lacking regarding the risks and benefits of discontinuing statin therapy for patients with limited life expectancy.

**Objective** To evaluate the safety, clinical, and cost impact of discontinuing statin medications for patients in the palliative care setting.

**Design, Setting, and Participants** This was a multicenter, parallel-group, unblinded, pragmatic clinical trial. Eligibility included adults with an estimated life expectancy of between 1 month and 1 year, statin therapy for 3 months or more for primary or secondary prevention of cardiovascular disease, recent deterioration in functional status, and no recent active cardiovascular disease. Participants were randomized to either discontinue or continue statin therapy and were monitored monthly for up to 1 year. The study was conducted from June 3, 2011, to May 2, 2013. All analyses were performed using an intent-to-treat approach.

**Interventions** Statin therapy was withdrawn from eligible patients who were randomized to the discontinuation group. Patients in the continuation group continued to receive statins.

**Main Outcomes and Measures** Outcomes included death within 60 days (primary outcome), survival, cardiovascular events, performance status, quality of life (QOL), symptoms, number of nonstatin medications, and cost savings.
Eligibility included:
- adults with an estimated life expectancy of between 1 month and 1 year
- statin therapy for 3 months or more for primary or secondary prevention of cardiovascular disease
- recent deterioration in functional status
- no recent active cardiovascular disease

~ 50% of the patients had a cancer diagnosis

Participants were randomized to either discontinue or continue statin therapy and were monitored monthly for up to 1 year.
Fitting it all together
How do we navigate advanced technology in individuals with multimorbidity and prognostic uncertainty?
Illness Trajectories

- **Sudden Death**
  - Function: High
  - Time: Death

- **Terminal Illness**
  - Function: High
  - Time: Death

- **Organ Failure**
  - Function: High to Low
  - Time: Death

- **Frailty**
  - Function: High to Low
  - Time: Death

What is dialysis?
What can dialysis provide and not provide?
What situations/conditions make providing dialysis challenging?
Is dialysis technically feasible for this individual?
Is dialysis in the best interest of this individual?
Is dialysis consistent with this individual’s goals?
Figure 2. Change in Functional Status after Initiation of Dialysis.

Data were missing for 549 nursing home residents at 3 months, 696 residents at 6 months, 823 residents at 9 months, and 787 residents at 12 months from the full analytic cohort of 3702 residents.
Figure 3. Smoothed Trajectory of Functional Status before and after the Initiation of Dialysis and Cumulative Mortality Rate.

The dashed vertical line indicates the initiation of dialysis in a hypothetical 75-year-old nursing home resident. MDS–ADL denotes Minimum Data Set–Activities of Daily Living. The numbers on the MDS–ADL axis run from highest to lowest.
Figure 3: Unadjusted Three-Month and One-, Three- and Five-Year Survival Rates* in Dialysis Patients, by Age Group, Canada, 2004 to 2013 (Percentage)

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>3 Months</th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 0-17</td>
<td>100</td>
<td>99.0</td>
<td>96.5</td>
<td>93.0</td>
<td>85.4</td>
</tr>
<tr>
<td>Age 18-44</td>
<td>100</td>
<td>98.7</td>
<td>95.6</td>
<td>87.7</td>
<td>77.8</td>
</tr>
<tr>
<td>Age 45-54</td>
<td>100</td>
<td>97.2</td>
<td>91.9</td>
<td>78.7</td>
<td>65.1</td>
</tr>
<tr>
<td>Age 55-64</td>
<td>100</td>
<td>95.5</td>
<td>87.3</td>
<td>69.0</td>
<td>51.7</td>
</tr>
<tr>
<td>Age 65-74</td>
<td>100</td>
<td>93.1</td>
<td>82.0</td>
<td>59.4</td>
<td>40.6</td>
</tr>
<tr>
<td>Age 75+</td>
<td>99.9</td>
<td>90.0</td>
<td>74.4</td>
<td>45.8</td>
<td>26.8</td>
</tr>
</tbody>
</table>
Is Dialysis Right for Me?

Patient Decision Aid

As your kidney function declines, one of your biggest choices is whether to get dialysis or conservative kidney management (CKM).

Dialysis is not for everyone. Dialysis can't cure kidney failure, but it may help you live longer and feel better. The older and sicker you are, the less likely it is that dialysis will help you. Some people will live as long and feel better with CKM, which does not include dialysis.

It's your choice whether to have CKM or dialysis.

This tool is to help you decide if CKM or dialysis is right for you. You can use it to talk with your healthcare team and loved ones about your decision.

It should take 15 to 25 minutes to complete. You can come back to it, or share it with someone you trust by using the email button or printing your responses. How you respond is anonymous and confidential.

"The Patient Decision Aid helped make sure that he knew the decision he was making, why he was making it, and using the right sort of values for what he was choosing."

- Family Member
Dorothy decides that dialysis is not consistent with her goals...
Admitted with shortness of breath...
Heated, Humidified High-flow oxygen (HHHFO): Optiflow™

(Optiflow™) Fisher & Paykel Healthcare
What are your experiences with HHHFO?
# Heated, Humidified High-Flow Oxygen (Optiflow™)

<table>
<thead>
<tr>
<th><strong>PRO</strong></th>
<th><strong>CON</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Can eat, communicate</td>
<td>Must be connected to wall oxygen source at all times</td>
</tr>
<tr>
<td>Improved mucociliary clearance</td>
<td>Reports of dyspnea crises when weaning</td>
</tr>
<tr>
<td>Less nasal dryness vs conventional oxygen therapies (1)</td>
<td>Not yet known if safe in hypercapnic respiratory failure</td>
</tr>
<tr>
<td>May reduce dyspnea severity and respiratory distress (2,3,4)</td>
<td>False sense of clinical stability</td>
</tr>
<tr>
<td>May reduce the need for mechanical ventilation (in pts accepting ICU)</td>
<td>Noisy device</td>
</tr>
<tr>
<td>More comfortable than face mask (3)</td>
<td>Limited resource, cost</td>
</tr>
</tbody>
</table>

1. Cuquemelle et al. Respir Care 2012  
2. Frat JP et al. NEJM 2015  
Severe hypoxemia + M1 GCD
Underlying causes have been investigated and being treated

Is HHHFO indicated?
Can’t tolerate other high flow oxygen devices
Dyspnea refractory to non-pharmacologic and pharmacologic interventions
Secretions are difficult to expectorate

Are there contraindications?
AECOPD with pH < 7.35
Acute or chronic respiratory acidosis
Nasal pathology

YES NO

Consider other modalities:
eg BIPAP for AECOPD with low pH

YES

NO

Continue treating with other high flow oxygen modalities to target SpO2

Discussion with patient & family
Pros/cons of optiflow
Treatments and expected outcomes
Plan for if deterioration occurs despite maximum medical Rx and HHHFO

Initiate HHHFO
Monitor and titrate therapy according to protocols

Improving clinical status?

YES

NO

Titrate HHFO to achieve treatment goals, discontinue if/when possible
Optimize causes/comorbidities
Reassess treatment goals +/- GCD
What about the ICD ...
1st Documented Successful Defibrillation of a Human (Dr. Claude Beck (1947))

From: The Birth of Defibrillation: A Slow March Towards Treating Sudden Death by M. Chihrin
Implanted Standby Defibrillators

When a problem gains wide social consciousness a diversity of practical and impractical solutions is engendered. This is now the case with the formidable problem of sudden death in patients with coronary heart disease.

Sudden death largely affects the ambulatory subject, prodromes are not distinctive, lead time is short, and death probably results from ventricular fibrillation (VF). Tragedy is magnified by the realization that the heart may have been only minimally impaired, that the arrhythmia could have been reversed, and, if reversed, a long and productive life would have been possible. Hospital experiences during this past decade have amply demonstrated that survival depends upon promptness in defibrillation. The time for effective action is limited to a few minutes. It seems unlikely, therefore, that medical intervention after the event will yield a substantial harvest of survivors. The inexorable logic of the problem coerces a new direction, namely, identification and protection of the patient at high risk from sudden death.\(^1\) One intriguing approach is to prevent sudden death by the implantation in the body of a standby automatic defibrillator system.\(^2,3\)

A completely implanted defibrillator can reverse VF in dogs.\(^2\) A special transducer-tipped catheter, sensing pulsatile pressure, is introduced through a peripheral vein into the right ventricle. Six seconds of asystole initiates automatic charging of a 16-\(\mu\)farad capacitor to a preset limit of 2500 volts, which is completed 50 sec after cessation of the heartbeat. If phasic right ventricular pressure returns, the discharge is inhibited; otherwise the charge is delivered through the right ventricular electrode. The circuit is completed by a second electrode positioned in the superior vena cava. As compared to delivery of the shock transthoracically,\(^4\) only a fraction
“... the implanted defibrillator system represents an imperfect solution in search of a plausible and practical application ...”

“If the patient with such an implanted device is found dead, numerous questions will loom including the gnawing doubt that electrocution may have been a factor ...”
The 11th World Survey of Cardiac Pacing and Implantable Cardioverter-Defibrillators: Calendar Year 2009—A World Society of Arrhythmia’s Project

HARRY G. MOND, O.A.M., M.D.* and ALESSANDRO PROCLEMER, M.D.†
From the *Department of Epidemiology and Preventive Medicine, Faculty of Medicine, Nursing and Health Sciences, Monash University, Melbourne, Victoria, Australia; and †Director of Cardiology Unit, Cardiothoracic Department, Azienda Ospedaliero-Universitaria, Udine, Italy

A worldwide cardiac pacing and implantable cardioverter-defibrillator (ICD) survey was undertaken for calendar year 2009 and compared to a similar survey conducted in 2005. There were contributions from 61 countries: 25 from Europe, 20 from the Asia Pacific region, seven from the Middle East and Africa, and nine from the Americas. The 2009 survey involved 1,002,664 pacemakers, with 737,840 new implants and 264,824 replacements. The United States of America (USA) had the largest number of cardiac pacemaker implants (225,567) and Germany the highest new implants per million population (927). Virtually all countries showed increases in implant numbers over the 4 years between surveys. High-degree atrioventricular block and sick sinus syndrome remain the major indications for implantation of a cardiac pacemaker. There remains a high percentage of VVI(R) pacing in the developing countries, although compared to the 2005 survey, virtually all countries had increased the percentage of DDDR implants. Pacing leads were predominantly transvenous, bipolar, and active fixation. The survey also involved 328,027 ICDs, with 222,407 new implants and 105,620 replacements. Virtually all countries surveyed showed a significant rise in the use of ICDs with the largest implanter being the USA (133,262) with 434 new implants per million population. This was the largest pacing and ICD survey ever performed, because of mainly a group of loyal enthusiastic survey coordinators. It encompasses more than 80% of all the pacemakers and ICDs implanted worldwide during 2009. (PACE 2011; 34:1013-1027)
The 11th World Survey of Cardiac Pacing and Implantable Cardioverter-Defibrillators: Calendar Year 2009–A World Society of Arrhythmia’s Project

HARRY G. MOND, O.A.M., M.D.* and
ALESSANDRO PROCLEMER, M.D.†

From the *Department of Epidemiology and Preventive Medicine, Faculty of Medicine, Nursing and Health Sciences, Monash University, Melbourne, Victoria, Australia; and †Director of Cardiology Unit, Cardiothoracic Department, Azienda Ospedaliero-Universitaria, Udine, Italy

A worldwide cardiac pacing and implantable cardioverter-defibrillator (ICD) survey was undertaken for calendar year 2009. Contributions from all 6 continents, including the Americas, Asia, Europe, Africa, and Australia, were utilized. In total, there were 328,027 ICDs implanted worldwide, with 222,407 new implants (133,262 in the USA – 60%) and 105,620 generator upgrades. Virtually all countries showed increases in implant numbers over the 4 years between surveys. High-degree atrioventricular block and sick sinus syndrome remain the major indications for implantation of a cardiac pacemaker. There remains a high percentage of VVI(R) pacing in the developing countries, although compared to the 2005 survey, virtually all countries had increased the percentage of DDDR implants. Pacing leads were predominantly transvenous, bipolar, and active fixation. The survey also involved 328,027 ICDs, with 222,407 new implants and 105,620 replacements. Virtually all countries surveyed showed a significant rise in the use of ICDs with the largest implanter being the USA (133,262) with 434 new implants per million population. This was the largest pacing and ICD survey ever performed, because of mainly a group of loyal enthusiastic survey coordinators. It encompasses more than 80% of all the pacemakers and ICDs implanted worldwide during 2009. (PACE 2011; 34:1013–1027)
Are ICDs effective?
Subjects were asked how many lives per 100 they would expect an ICD to save during the first 5 years after implantation.
Patient Expectations from ICDs to Prevent Death

Subjects were asked how many lives per 100 they would expect an ICD to save during the first 5 years after implantation.
Patients were asked how many lives per 100 they would expect an ICD to save during the first 5 years after implantation.
Time for a Change — A New Approach to ICD Replacement

Daniel B. Kramer, M.D., Alfred E. Buxton, M.D., and Peter J. Zimetbaum, M.D.

Clinical trials of implantable cardioverter–defibrillators (ICDs) continue to drive expanding indications for these devices.¹ More than 100,000 ICDs are implanted in the United States annually. Of these procedures, at least 25% are generator replacements required as a result of depleted battery life.² Because of the high cost and concern about patient selection, the appropriateness of initial device placement has been closely scrutinized. But there has been little consideration as to what happens in the years after implantation, when ICD batteries drain sufficiently to require replacement, device leads become defective, or systems become infected. Should...
ICD deactivation was discussed and agreed upon
If you have any questions or comments regarding the information in this guideline, please contact the Cardiac Device Clinic at Foothills Medical Centre.

PURPOSE
To provide guidance to decision making around turning off the defibrillator function (tachycardia therapies) in patients who are at the end of their life.
Dorothy ultimately dies peacefully...
Recap

Employ strategies to overcome barriers in providing a palliative care approach.

Recognize the impact of prognostic uncertainty in delaying the provision of palliative care.

Apply a rational approach to deprescribing medications and advanced interventions in persons with chronic disease in the last years of life.
Yankee Doodle

Yankee Doodle came to town, a-riding on his

horse, Stuck a feather in his cap and called it mac-a-

Pih animato, con espressione

Yankee Doodle, keep it up!

Yankee Doodle, dandy! Mind the music

and your song, and with the girls be han-dy!
Questions