Collaborative Drug Therapy Management (CDTM)

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Definition

- Agreement between one or more prescribers and qualified clinical pharmacists
- Work within the context of a defined protocol
- Permits the clinical pharmacist to assume responsibility for performing
  - patient assessments
  - ordering drug therapy–related laboratory tests
  - selecting, initiating, monitoring, continuing, and adjusting drug regimens.
Colorado Law


- Rule 6.00.00 Board of Pharmacy

- Rule 900 Colorado Medical Board

- SB 16-135: expected to go into effect August 10, 2016 (awaiting Governor Hickenlooper’s signature)
Colorado CDTM Rules

- Agreement between a pharmacist and a physician or advanced practice nurse to treat via protocol
- Protocol is pursuant to initial diagnosis made by prescriber
- Protocol within the scope of the prescriber’s practice
- Specific order for a specific patient
  - Delineates which protocol to use
  - Any party can refuse to participate at any time
Pharmacist Qualifications

- Proof of **completion of a pharmacy residency** accredited by the American Society of Health Systems Pharmacists or the American Pharmacists Association in the specialty being practiced; or

- Proof of completion of **one (1) year of practice experience in pharmacotherapy**, **and 40 hours of onsite supervised clinical practice** and training in each area in which the pharmacist is choosing to practice; or

- Completion of a **certificate program** accredited by the Accreditation Council for Pharmacy Education in each area of practice, **and 40 hours of on-site supervised clinical practice** and training in each area in which the pharmacist is choosing to practice; or

- Completion of at least **40 hours of ACPE approved continuing education** regarding clinical practice **and 40 hours of onsite supervised clinical practice** and training in the area in which the pharmacist is choosing to practice; or

- Current **Board specialty certification from the Board of Pharmaceutical Specialties**, current certification from the National Institute for Standards in Pharmacist Credentialing, or current certification from the Commission for Certification in Geriatric Pharmacy. Such credentials must be in the area of pharmacy practice undertaken in the drug therapy management...
Practice by Protocol

- Specific plan with a set of directions for the pharmacist
  - Criteria must be created for when to order laboratory tests and how to interpret them
  - Provide precise instruction as to exactly how to modify drug therapy

- Created by the prescriber, groups of prescribers, hospital medical committee, or pharmacy and therapeutics committee

- Must be evidence-based

- Reviewed and revised annually
Documentation

- Pharmacist must notify the prescriber within 24 hours of making any medication changes
- Prescriber may override any action taken by the pharmacist when the prescriber deems it necessary
SB 16-135

- Modifies CO Insurance code and Pharmacy Practice Act
- Expected to go into effect August 2016
- Allows for payment for services provided through CDTM
- Physician or advanced practice nurse can grant authority to the pharmacist to “provide evidence-based health care services to one or more patients pursuant to a specific treatment protocol”
- Expands CDTM beyond a single drug
Examples

- Warfarin
- Insulin titration
Appendix D: Suggested Dose Adjustment and Monitoring of Warfarin Therapy

Figure 1: Suggested Dose Adjustment and Monitoring of Warfarin Therapy (Goal INR 2.5, Range 2 – 3)

***ADJUSTMENTS SHOULD BE MADE ACCORDING TO PATIENT CHARACTERISTICS AND CLINICAL JUDGEMENT***

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Clinical Assessment
- compliance
- medication changes
- changes in diet
- lifestyle changes
- bruising/bleeding
- sign or symptoms of disease

INR within therapeutic range?
- Yes
  - Stable INR on same warfarin dose for 6 months?
    - Yes
      - Recheck within 6-8 weeks
    - No
      - Recheck within 4 weeks
- No
  - Correctable factors?
    (change in medications, compliance, illness, diet, ETOH, etc.)
    - Yes
      - Use clinical judgment; consider temporary adjustment and recheck in 1 – 2 wks
    - No
      - Dose

Subtherapeutic
- INR < 1.3
  - Increase weekly dose by 15 – 20%
  - Labs in 5 – 7 day
  - Labs 2 weeks
- INR 1.3 - 1.5
  - Increase weekly dose by 10 – 15%
  - Labs in 1 week
  - Labs 2 weeks
- INR 1.5 - 1.8
  - Increase weekly dose by 5 – 10%
  - Labs in 2 weeks
  - Labs in 2 weeks
- INR 1.8 - 2.0
  - No change
  - Labs 2 weeks

Supratherapeutic
- INR 3.0 – 3.2
  - No change
  - Labs in 2 weeks
- INR 3.2 – 4.0
  - Decrease weekly dose by 5 – 10%
  - Labs 2 weeks
- INR 4.0 – 5.0
  - Decrease weekly dose by 10 – 15%
  - Labs in 1 week
  - Labs in 3 days
- INR 5.0 – 9.0
  - Hold 1 - 2 doses
  - Decrease weekly dose by 15 – 20%
  - (Optional: Vitamin K 2.5 mg PO)
  - Labs in 3 days
- INR > 9.0
  - Hold dose until INR < 3
  - Decrease weekly dose by 15 – 20%
  - (Optional: Vitamin K 2.5 - 5 mg PO)
Basal insulin
(usually with metformin +/- other noninsulin agent)

- Start: 10 U/day or 0.1-0.2 U/kg/day
- Adjust: 10-15% or 2-4 U once-twice weekly to reach FBG target.
- For hypo: Determine and address cause; ↓ dose by 4 U or 10-20%.

If not controlled after FBG target is reached (or if dose >0.5 U/kg/day), treat PPG excursions with mealtime insulin. (Consider initial GLP-1-RA trial.)

Add 1 rapid insulin injection before largest meal

- Start: 4 U, 0.1 U/kg, or 10% basal dose. If A1C <8%, consider ↓ basal by same amount.
- Adjust: ↑ dose by 1-2 U or 10-15% once-twice weekly until SMBG target reached.
- For hypo: Determine and address cause; ↓ corresponding dose by 2-4 U or 10-20%

If not controlled, consider basal-bolus.

Add ≥ 2 rapid insulin injections before meals (“basal–bolus”)

- Start: 4 U, 0.1 U/kg, or 10% basal dose/mal. If A1C <8%, consider ↓ basal by same amount.
- Adjust: ↑ dose by 1-2 U or 10-15% once-twice weekly until SMBG target reached.
- For hypo: Determine and address cause; ↓ corresponding dose by 2-4 U or 10-20%

Change to premixed insulin twice daily

- Start: Divide current basal dose into 2/3 AM, 1/3 PM or 1/2 AM, 1/2 PM.
- Adjust: ↑ dose by 1-2 U or 10-15% once-twice weekly until SMBG target reached.
- For hypo: Determine and address cause; ↓ corresponding dose by 2-4 U or 10-20%.

If not controlled, consider basal-bolus.
CDTM at Salud

2009: Pharmacy Student-Run Anticoagulation Service Introduced

2013: Clinical Pharmacists Introduced to Clinic (March, August)

Fall 2013: CDTM for diabetes, hypertension, dyslipidemia approved

May 2016: CDTM for Mood disorders and anxiety approved

Future possibilities: asthma, COPD, hypothyroidism
Questions?