

Advancing Diagnostic Excellence in Rural Areas

Incorporating Point-of-Care Strategies to Improve Primary Care Diagnosis

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Objectives

- Discuss unique aspects of rural primary care that contribute to excellence
- Explain point of care strategies that preserve these aspects and improve care
- Provide a successful point of care implementation example

Disclosures

- Unsubstantiated generalizations are being made for the purposes of constructive argument.
- Rural primary care is in no more need for improved diagnostic capability than urban. And that applies to subspecialty care as much or more than primary care.

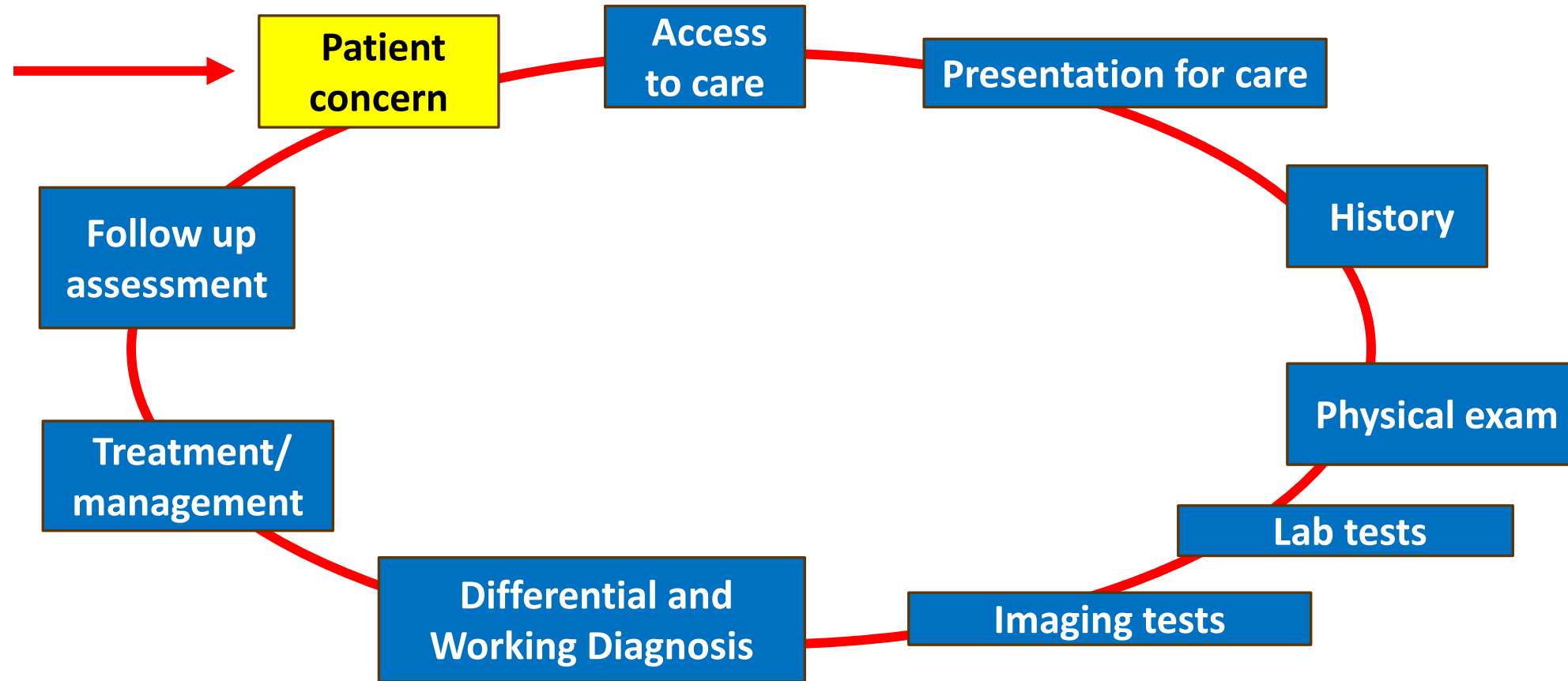
In fact, rural can be BETTER ...

Care provided by rural generalists who have a broader scope of care...

- ...is less fragmented than that provided by a collection of subspecialists
- ...enables better continuity across transitions in care: between ambulatory, inpatient, rehabilitation, maternity, infant and children and nursing home
- ...shares social and environmental health determinants with the people they care for

This defragmentation, continuity and shared living experience is important because “diagnosis” is not a once-and-done thing ...

The diagnostic cycle



Any “Improvement” Must Preserve ...

- * Continuity
- * Communication
- * Defragmentation
 - Saves cost (both time and money)
 - Reduces duplication (labs, imaging, medications)
 - Reduces polypharmacy/adverse effects
 - Reduces diagnostic error and treatment that produce harms

Point of care strategy: Telehealth

Can reduce the need for travel

- Access to care
- Travel is a cost to patient/family/community/economy

Can improve the accuracy of “keep v. transfer” decisions (Stroke assessment, ICU, ER)

Can stabilize and increase workforce :

- Preservation of generalist broad scope of care
- CO-Management of complex problems
- Reduces turnover, maintains numbers, enables continuity, prevents burnout

Additional point of care strategies ...

- Knowledge that enhances rural clinicians' ability to recognize and manage patients locally: ECHO
- Point of care lab diagnostics that provide results immediately without waiting for return of “send out”.
 - Kit tests: antigen or PCR; respiratory and other panels, individual: glucose, A1C, coagulation,
- Teleradiology for interpretation of imaging generated at the rural site.
- Ultrasound: Combines information, communication, continuity in the hands of a practicing clinician

What is special about ultrasound performed by treating clinician at point-of-care?

- Different from X-ray, CT, MRI: interpreted as it is being done. Very operator-dependent.
- Brings examiner's knowledge along
- Places examiner and patient face to face with hands-on
- Communication becomes part of the process
- Combines physical exam with imaging
- Safe, relatively inexpensive can repeat to gauge progress

Point of care story: 1981 - present

- Arrival in rural site: 1978
- Major components of practice: maternity care and EMS
- No ultrasound for 120 mile round trip; travel often complicated by bad weather
- Apprenticeship with perinatologist consultant who was also learning
- Implemented care: all usual applications. No missed twins or ectopic pregnancies after ultrasound implemented
- Gradual expansion to wide range of clinical applications beyond maternity care: eval of trauma patients; safer procedures
- Preserved continuity, communication and defragmentation.
- Same story repeated for GI endoscopy and colposcopy

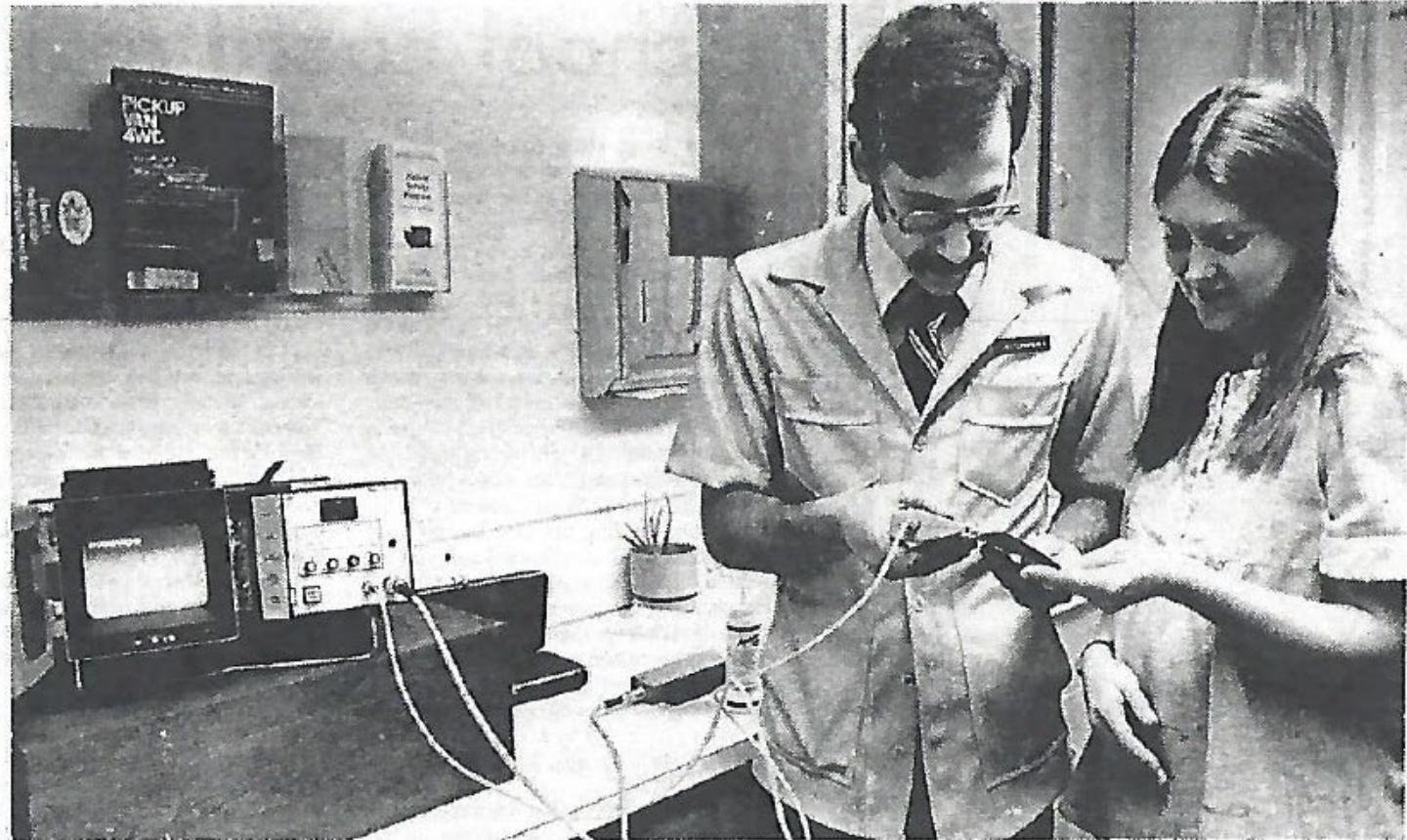
Rural newspaper picture from 1981

THE ENTERPRISE, BINGEN-WHITE SALMON, WA. THURSDAY, JAN. 29, 1981-THREE

Doctors receive 'sound' advice

By BRIAN RUST
Staff Writer

The first pictures of a young baby usually become family keepsakes, after parents and grandparents show them to family and friends to show off the new arrival.



Baby's first photo

Dr. Mark Deutchman and [redacted], a nurse at the Mid-Columbia Family Health Center in White Salmon, measure an ultrasound picture of her unborn baby. The measurement will accurately determine the age of her pregnancy and can help the doctor to diagnose prenatal health problems. The picture is made possible by the machine at left, which uses high frequency sound waves to produce an image of the baby.

- * **Continuity**
- * **Communication**
- * **Defragmentation**
- * **Access**
- * **Generalist scope of care preservation**
- * **Workforce stabilization**



Summary

Improvements in rural primary care diagnosis are best that promote continuity, communication and defragmentation of care.

Improvements in technology do NOT replace highly-trained LOCAL generalists. It is the presence of those generalists that makes the technology worthwhile.