

Cancer Medicine, Digital Health and the Covid Pandemic....and After....

Lawrence N Shulman, MD
Deputy Director for Clinical Services
Abramson Cancer Center
University of Pennsylvania

July 2020



Medicine is slow to change.....until Covid

The Covid pandemic presented medicine with an unprecedented challenge and no previous experience to act on

Patient Care Re-design

- Rapid modification of diagnostics, treatment, follow-up
- Rapid need to streamline care and reduce in-person care
- Rapid need to manage inefficiencies of care

Data.....

- Rapid need for real-time data to better understand Covid-infected and Covid non-infected cancer patients

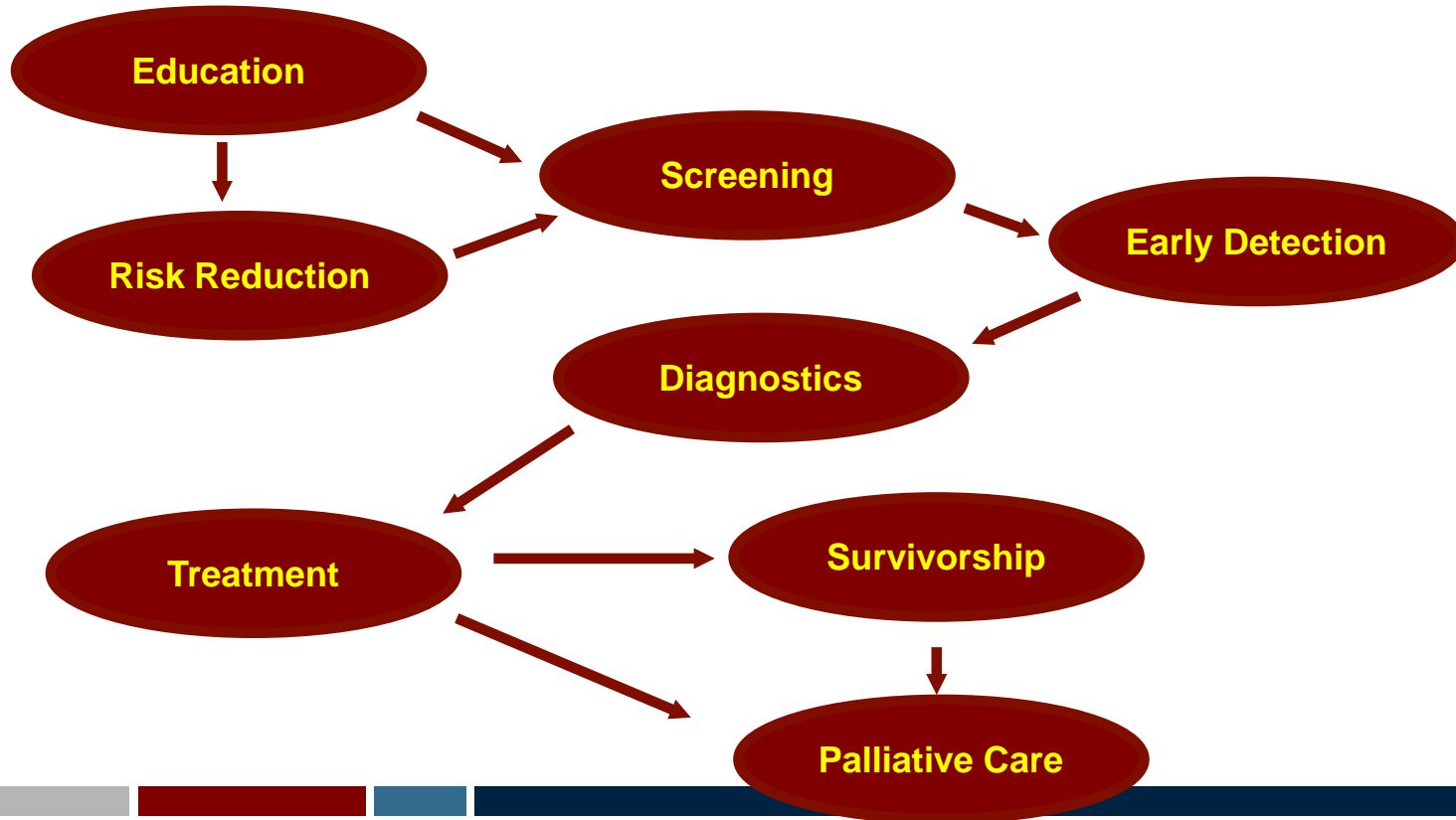


Is Cancer Medicine Different than the Rest of Medicine?

- ▶ Many different cancers with different “urgency” of diagnosis and treatment
- ▶ Potentially lethal disease if not diagnosed and treated
- ▶ Prognosis often linked to stage at diagnosis
- ▶ Screening, diagnostics, surgery, systemic therapy, radiation, surveillance – complex interactions
- ▶ Therapy increasingly complex and toxic



The Continuum of Cancer Care and Services



Why are we in Medicine so far behind?

► Banking

1. Completely in person – withdrawals/deposits, M-F, 9AM-3PM. Bill pay by check and mail
2. ATMs for cash
3. Direct deposit paychecks
4. Deposits in ATMs
5. Electronic Payments - Bill pay
6. Deposits by smart phone
7. ATMs in Kigali, Rwanda

When was the last time you waited in a teller line? Went to the bank in person?

Medicine has been stuck in #1



Clinical Investigation - Trials

- ▶ Accrual often suspended
- ▶ Patients currently on trial often followed remotely for many visits – including assessment of toxicity, etc
- ▶ Patients consented, enrolled, and followed remotely when feasible – allowing for greater access to trials for patients
- ▶ Will any of these changes “stick”??



Palliative care/end-of-life care

- ▶ Sickest patients whose travel to hospital is most difficult/burdensome
- ▶ Palliative care consultations and on-going care via Tele-medicine
- ▶ Consultation rate increased, no-show rate decreased
- ▶ Increase in declining “nth” line therapy
- ▶ Increase in Serious Illness Care Discussions (Ariadne labs)
- ▶ Increase in early hospice use



Some thoughts....."Augmented Intelligence"

- ▶ Doctors, nurses, lab techs, etc, will not be replaced
- ▶ The workforces are limited
 - We need to decide what people need to do vs what technology can do – as well or better!
- ▶ Need exacerbated by the rapid development of technology and therapeutics, and growing complexity of cancer medicine
- ▶ Need exacerbated by the Covid Pandemic








Some thoughts....."Augmented Intelligence"

- ▶ Technologies must be tested for efficacy and safety
- ▶ Technologies must be tested for efficiency and acceptability
 - What is acceptable and good for patients, and improves their interaction with the healthcare system and their outcomes?
 - What is acceptable and good for providers?
- ▶ Financials and payment models must support these models of care
 - What will payors be willing to pay for?

NCPF Workshop – before Covid

Developing and Sustaining an Effective and Resilient Oncology Careforce: Opportunities for Action

Samuel U. Takvorian, MD, MS ^{1,*} Erin Balogh, MPH ² Sharyl Nass, PhD,³ Virginia L. Valentin, DrPH, PA-C
⁴ Lori Hoffman-Hogg, RN, MS, AOCN,⁵ Randall A. Oyer, MD,⁶ Robert W. Carlson, MD ⁷ Neal J. Meropol,
MD,⁸ Lisa Kennedy Sheldon, PhD, APRN, AOCNP, FAAN ⁹ Lawrence N. Shulman, MD, FACP, FASCO¹⁰

JNCI 2020

Data.....we need data.....and fast!!

- Need to rapidly understand effects of Covid infection on cancer patients
- Need to rapidly understand the effects of the pandemic on cancer patients not infected with Covid
- Need to assess effectiveness and safety of alterations to care

Currently our data systems are not equipped to do this

Now what???

- ▶ Providers, regulators, payors and patients need to come together to facilitate change
- ▶ Ossified aspects of cancer care need to be filed with the dinosaurs

“Bureaucracy is the death of any achievement”

Albert Einstein

“Everywhere the old order changes and happy they who can change with it.”

William Osler



Thank You

*We need to learn from this experience
We need to carry forward “the good”*

