Can We Define Quantity Service VS Quality Service in COVID-19 Pandemic?
Rule of C/D/CFR Model

Chun (George) Yang, MD, PhD

During the COVID-19 pandemic, the mainstream media uses confirmed cases and death numbers for reporting to public. If we define confirmed cases as C and death numbers as D, this reporting and ranking model is C/D model. With the C/D model, the higher the C, the higher the D. To properly address the mortality, enough units of ICU may be needed. We define this as Quantity Service. Since April 17, 2020, we also shared the discovery that the ranking of Case Fatality Rate (CFR), which is death number divided by confirmed case number. We have found that the CFR ranking has been consistently different from C/D rankings. So we call it as C/D/CFR model. This is an improvement of C/D model. The ranking of CFR could help to identify areas that medically may be underserved. We define this as Quality Service. If we take action properly, the high CFR counties may improve and become CFR reducing counties. We use Massachusetts state data to illustration, and then extend to its neighborhood states, New York, Connecticut, Vermont, etc. We also use it to analyze all states of the USA and other countries in the world.

Yang C. Propose COVID-19 task force for counties with high case fatality rate (HCFR). Communicated since April 17, 2020 (request available)

Yang C. COVID-19 Cases: MA county rankings, identification of counties with high case fatality rate (HCFR). Communicated since April 17, 2020 (request available)

Should The Patient Have Regular Meal or Puree - Rule of Careful Evaluation

Chun (George) Yang, MD, PhD

The Pt. was on puree for long term at nursing home. After admission to hospital, I found she should be trying regular meal. Long term on puree had gradually weakened her digestive system overall, quiet significantly. It may have contributed to her constipation, at least partially. A puree diet may be lower in fibers than regular meal significantly. This may be a wrong direction for the Pt. When she tried food brought from home, she had no problem to chew and swallow them. I, therefore, made a suggestion to her care team. After evaluation, the hospital agreed. By enjoying regular food, her rehab of digestive system began. Then, the Pt. was discharged to a nursing home for a short term rehab. She was on puree diet again. The nurse argued that the Pt. had trouble to chew regular food and could choke so her previous nursing home fed her on puree for long term. I then sit down with her nutritionist, watching her eating some regular foods brought for her for an entire meal. During eating, she twice coughed. But they were not related to chewing nor swallowing, not choking. The nutritionist and the nurses also continuously observed the Pt. on other regular meals. Our close observations provided with evidence that the Pt. could handle her regular meal very well. The Pt. has been on regular meal since then.

Tachycardia in a Senior Patient - Rule of Checkup (Note 2)

Chun (George) Yang, MD, PhD

The first bedside note was written in 2017 - it is a case that tachycardia turns out to be UTI.

http://energinity.com/2017Proceedings1.pdf

What happened today is different from the first one. (April 23, 2020). After a family meeting, I check the patient to see how things are going with her at 1:50 pm. HR is 130. No fever. BP normal. Conscious. The patient, however, is apparently distressed. Complaining of pain in poop area. Asked a nurse, reporting morning HR was 99. The patient does not eat much these days. Her overbed table, only a nutrition supplement Ensure. No water. Hands and legs are cold. Poop area rash, swelling, and some skin broke down. The patient is still on oral antibiotics for UTI. Non fever infection? Cancer crisis? PE? Her attending thought to exclude PE, planning for a chest image study. In fact, we would not figure out what was the real cause for a couple of hours. Until her nurse checked over and made a suggestion. The problem is solved. It is certainly a preventable practice. Thank you, nurse.

Patient Suffered From Chronic UTI Due to Incontinence – Rule of Access Shower

Chun (George) Yang, MD, PhD

Infection is one of the most deadly complications among cancer patients. A patient suffered from severe infections, including bacteremia in 2018 during hospitalization, a sepsis / MI with ICU admission at nursing home in 2019, and sepsis / bacteremia with two transfusions during hospitalizations early this year (2020), February and April, respectively. By April, a PICC line was started. The patient was on long term antibiotics. IV line then oral treatment. Multiple drug resistance, e.g. MRSA was identified on 1/24/20. While her doctors were focusing on controlling her infection with long term antibiotics, I was focusing on her causes of infection. Is her UTI preventable? By April / May I was able to convince her attending / care team that to help her access to shower could be a significant improvement. Going through several meetings, they accepted my proposal. The hospital helped to order a very helpful device, duplex wheelchair. After discharge, the equipment was delivered. For the first time since 2018, the patient was able to take a shower. (with some assistance). Then, I realized that stopping the antibiotics is the right choice once she showers regularly. The patient has been infection free since May. This is a significant progress in the patient's disease course.

Patient Has Suddenly Mood Swing – Rule of Rule Out Drug Side Effect First

Chun (George) Yang, MD, PhD

Although the patient's medical condition improved at home, admissions to hospitals for a couple of times troubled the patient with transfusions. The patient received transfusion on February 14, 2020, and again on April 16, 2020. In ward, we observed her onsets of mood swing, agitation, refusing food, anger, and refusing vital checking. These episodes were short in duration. Also, I was puzzled by the fact that it seemed her condition was worsening during hospitalizations. Her appetite decreased. Quickly, she lost weight, although she gained weight at home. Why did this happen in hospital? We would not know until September 23, 2020 when the patient visited the ER due to her cancerous cough. The patient was on IV antibiotics. Then, we observed the similar pattern of her mood swing again. It puzzled us. To explain it, I said - first, we had to think of possible side effects of a drug. Quickly, an ER attending physician came to help, he told us that he thought of antibiotics' side effects, and he had ordered brain scan and blood tests. Her nurse thought that part of dementia was causing it. However, I thought neither antibiotics nor dementia causes it. I kept asking them - what other medications the patient had taken. The nurse began to tell me each medication the patient had received in chronology. Finally, when the nurse told me one drug's name - Lovenox, it struck me. I realized it is this drug that has troubled her. This medication's side effects cause the patient not only acute episodes of mood swing but also reduced meal intake. This explains why her medical conditions worsened during hospitalizations.