

COMM 225, WINTER 2014: CASE STUDY

DUE: April 7, 2014, 23:55 HR, SUBMIT ONLINE IN THE DROP BOX
TO BE DONE IN GROUPS OF MAXIMUM OF 3 STUDENTS (WITH SAME CONTENT EXPECTATIONS).



Long and excessive waiting times in emergency rooms, hospitals, and walk-in clinics have become an inevitable part of experience. Refer to one of the recent report from CBC news:

Wait times for patients 'worsening'

[CBC News](#) : Posted: Jun 19, 2012 10:00 AM ET

Some Canadians are waiting longer for medical treatments that federal and provincial governments agreed to provide more quickly, according to a new report.

The Wait Times Alliance, which includes doctors from specialties such as emergency medicine, radiology and cardiology, released its annual report card on wait times Tuesday.

In a reversal from previous report cards, there was a decline in performance in patients receiving care in the five areas identified as priorities by federal, provincial and territorial governments under the 2004 Health Accord:

- Diagnostic imaging such as MRI and CT scans.
- Hip and knee replacements.
- Radiation oncology.
- Cataract surgery.
- Bypass surgery.

"Although some provinces have shown improvement, the overall results point toward lengthier waits for Canadians," the report card said.

"Unlike the past several years, the 2012 results show a worsening of performance with regard to patients receiving care within the pan-Canadian benchmarks set by government. Although some provinces have shown improvement, the overall results point toward lengthier waits for Canadians."

Even where provinces are earning high grades, some regions within the province may not be doing as well, a reflection of "slippage," said Dr. Chris Simpson, a cardiologist in Kingston, Ont., and chairman of the group.

Simpson said the alliance sees a strong role for the federal government to play in setting national strategies and facilitating their implementation, as was done in the past for heart disease.

"We need to look at what some of the lessons learned are from jurisdictions and continue to work with them," Health Minister Leona Aglukkaq replied.

Longer waits

Prince Edward Island earned an "F" for knee replacements, meaning less than 50 per cent of the population was treated within the benchmark, and a "D" for hip replacements — 50 to 59 per cent. Wait times for both procedures increased from last spring, the group said.

[Manitoba](#) earned "D" for hip and knee replacements and cataract surgery. Those three areas as well as radiation therapy had longer wait times than a year ago.

Ontario scored the best with "A" across the board and no significant changes in wait times.

The national averages were "A" for heart bypass and radiation therapy, "B" for cataract surgery and hip replacements, and "C" for knee replacements.

In the report, an "A" grade means that 80 per cent of all people are being treated within the time set in the benchmark. This falls to 70 per cent to 79 per cent for "B," and 60 per cent to 69 per cent for "C."

The association of pediatric surgeons collected its own data last year, which suggested that 31 per cent of children waited too long for surgery, a three per cent increase from the year before.

Some provinces are slipping backwards, the alliance said, because so many hospital beds are filled with elderly patients with dementia.

Hospital beds

The group called for a national strategy to deal with illnesses such as Alzheimer's disease and to factor dementia into the management of other chronic diseases such as heart disease and diabetes. Doing so could help prevent those patients from ending up in hospitals in the first place, they said.

When seniors do go to hospital, they should be screened for delirium and dementia as early as possible to trigger services such as [geriatric medicine](#) and psychiatry while they're still waiting for a hospital bed, the report's authors suggested.

Dr. Frank Molnar of the Canadian Geriatrics Society said patients with dementia often go to hospital because of conditions like pneumonia or heart failure but destabilize in hospitals and can't be discharged home.

One solution is building up frontline community care, the group said.

At the Ottawa Hospital, Dr. Jeffrey Turnbull said 126 patients who would be better served with rehabilitation, enhanced home-based services or long-term care are in the hospital waiting to be discharged today while 14 other patients are waiting for a bed.

"Right across the country, this is a systemic problem that all facilities, all institutions have," Turnbull said. "It's a problem that's not getting better."

Provinces and territories know what areas are priorities for them, Aglukkaq said, noting that the problems of an aging society don't necessarily apply in the North where the average population is younger.

The findings are consistent with a report in March from the Canadian Institute for Health Information that said wait times are about the same as in 2009 with some provinces struggling more than others.

The Wait Time Alliance was created in 2004 to provide governments with advice from the physicians' perspective on medically acceptable wait-time benchmarks.

It includes the Canadian Medical Association, and other national organizations representing experts such as radiation oncologists and cardiovascular specialists.

Wait Time Report Card

	Gov't benchmark	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Nat. grade
Joint Replacement - Hip	26 weeks	A	D	D	C	A	A	D	C	B	A	B
Joint Replacement - Knee	26 weeks	C	F	F	C	B	A	D	D	C	B	C
Radiation Therapy	4 weeks	A	A	A	A	A	A	A	A	A	A	A
Cataract Surgery	16 weeks	B	C	C	A	A	A	D	C	B	B	B
Heart - Coronary Artery Bypass Graft	26 weeks	A	n/a*	A	A	n/a	A	A	A	A	A	A
Diagnostic Imaging - MRI	No benchmark											
Diagnostic Imaging - CT	No benchmark											

*n/a - No data provided or data do not lend themselves to estimates of performance. *Source: Wait Time Alliance*

Q1: Discuss the major reasons for long wait times in emergency rooms, hospitals, and walk-in clinics? [300-400 words].

Q2: Based on your response to Question 1, describe two remedial measures that you would recommend to deal the problem of long waiting times in health care service sectors? [300-400 words]

Airplane passengers experience the unsmooth process of the aircraft boarding. From the airline company's perspective, every minute a plane spends at the terminal costs \$30 or more. Assuming the average carrier runs 1,500 flights a day, saving as little as six minutes per flight would add up to \$100 million a year. For hard-pressed airlines running on razor-thin margins, that really would be astronomical. Here is what a New York Times journalist has to say about this problem:

Source: <http://www.nytimes.com/2011/11/01/business/airlines-are-trying-to-cut-boarding-times-on-planes.html?pagewanted=all&r=0>

Most Annoying Airline Delays Might Just Be in the Boarding

By [JAD MOUAWAD](#). Published: October 31, 2011 (New York Times)

It's the common tale of woe for many travelers waiting to board a plane. First the airline has to go through a long list of passengers who have priority: First- and business-class passengers, frequent fliers, elite card holders, uniformed members of the military, families with children, those who hold credit cards affiliated with the airlines, passengers who paid for priority seats.

By the time coach travelers are called, the overhead bins seem to be already full.

Airlines have been boarding passengers since the first commercial flight, but as they have added new classes of seating to their cabins and new fees for priority boarding — all in the name of more revenue — they have slowed down the whole process.

Checked-baggage fees have only added to the problem, because travelers now take more roll-ons onboard, blocking the aisles as they try to cram their belongings into any available space. And that's not to mention the fact that planes are now fuller.

That is why some airlines have gone back to the drawing board to rein in a lengthening process. As it is, boarding time has doubled over the last decades, according to research by Boeing. It now takes 30 to 40 minutes to board about 140 passengers on a domestic flight, up from around 15 minutes in the 1970s.

"They should have a different line for people with carry-ons like they do at baseball games with bags," said Brian Proffitt, who was flying to Houston from New York with Delta Air Lines. "The boarding process has become worse than the security lanes."

One airline did figure out a way to sharply cut boarding time. Spirit Airlines found that passengers got to their seats much more rapidly once it started charging \$20 to \$40 per carry-on bag. Since it's \$2 cheaper to check a bag, more passengers do, and Spirit claims its "stress-free boarding" saves six minutes on average.

Others are reluctant to take such a drastic step for fear of alienating customers.

It should be no surprise that boarding has become one more frustrating step in airline travel. Or, as Mark E. DuPont, the vice president for airport services planning at American Airlines, put it: "Boarding can be like driving behind a slow-moving truck that you can't overtake."

Airlines have tried all kinds of elaborate tricks over the years to leave the gate on time. Some board passengers in the back rows first, while others give priority to those with window seats, and some come up with elaborate combinations, including one no longer used, known as the "reverse pyramid." But passengers can be unpredictable.

"The real world has wrecked their optimization plans," said Matthew Daimler, the founder of SeatGuru, a Web site that helps passengers find the best seats on a particular plane.

American Airlines changed the way it boarded its planes in May. It still gives priority to business passengers and frequent fliers but then boards passengers who paid an extra \$9 to \$19 to get on early, guaranteeing they will find space to stow their bags.

The rest of the passengers are then brought in as three groups, sorted in an attempt to spread them out more evenly through the cabin and allow more people to find their seats faster. The approach also helps passengers stow their luggage more efficiently, nearer to their seats, allowing more people to find overhead space and cutting the number of bags that need to be checked at the last minute — a common cause of delayed flights.

The new method has cut boarding by four to five minutes, Mr. DuPont said.

All the extra fees have been a major benefit to the airlines' bottom lines. [According to estimates](#) by Amadeus, a global distribution service, they will add up to \$12.5 billion in 2011 for major United States airlines, up 87 percent from last year.

The challenge of boarding is thornier for narrow-body planes with single aisles that are used on domestic flights than on the larger planes on international flights where passengers have two possible pathways.

A scientist once said the problem of boarding a single-aisle plane was a real-life application of Einstein's theory of relativity, where passengers are constrained in their movements through space and time.

A few years ago, Jason H. Steffen, an astrophysicist at Fermilab in Chicago, figured there had to be a better way to board after he was held up on the jetway while waiting for a flight to Washington. "If the process was efficient, there would be no line," he said.

He set out to solve the problem using a "Markov chain Monte Carlo optimization algorithm" — a mathematical program well suited to the kind of haphazard events that occur in an airplane cabin. Much to his surprise, he found that the common back-to-front method was among the slowest: passengers must wait for those ahead of them to stow their bags and sit down. [It is far better, it turns out, to let passengers board randomly.](#) Mr. Steffen claims he found the fastest way, which involves boarding passengers from the back who are seated two rows apart.

"The lesson I learned comes down to this: you want to spread passengers out and not concentrate them while boarding," he said. But the method is unlikely to be picked up because the airlines say it is too complicated.

Others have also searched for the holy grail of boarding. In 2002, America West Airlines, which later merged with US Airways, hired industrial engineers from Arizona State University to speed up the boarding process. The group came up with an approach that they called the "reverse pyramid." It begins with passengers assigned to window seats in the back, and gradually makes its way to the front of the plane in a staggered pattern.

That saved time, but US Airways dropped it in 2007 because some passengers without elite status sitting in the front could not find space for their bags.

"Overhead space has really become a premium product," said Kerry Hester, the senior vice president for operations planning at US Airways.

Another approach is used by Southwest, which says it can board its planes in around 15 minutes. It says the root of the delays is the practice of assigning seat numbers. Southwest's passengers are instead assigned to one of three boarding groups, and then given a number based on the time they checked in.

Passengers who buy a premium "Business Select" ticket are guaranteed to board ahead of everyone, followed by Southwest frequent fliers and passengers who bought a \$10 one-way "early-[bird](#) check-in" pass.

The airlines, meanwhile, keeps looking for what Scott O'Leary, managing director of customer experience at United, described as "the sweet spot between speed and a sense of order."

Q3: Discuss the impact of long boarding times on (i) the revenue of airlines and (ii) passenger's travel? Recommend another way (not reported above) for the airlines to improve the boarding process [300-500 words].