

FINANCE COMMITTEE MEETING MINUTES
MARCH 11, 2019
APPROVED 04/02/19

SB Members Present: Barry A. Pease, Chair (VIA PHONE); Alison S. Manugian, Vice Chair; John R. Giger, Clerk; Rebecca H. Pine, Member

Members Absent: Joshua A. Degen, Member

FinCom Members Present: G. Green, B. Robertson, M. Manugian, M. Prest, C. Doody, S. Whitefield

FinCom Members Absent: L. Leonard

Also Present: Mark W. Haddad, Town Manager; Dawn Dunbar, Executive Assistant

Ms. Manugian called the meeting to order at 7:00pm and reviewed the agenda.

Mr. Gary Green called the Finance Committee to order at 7:00pm.

PUBLIC COMMENT

Mr. Prest handed out a document that he compiled relative to the request for 2 additional Fire Fighter/EMT's in the Fire Department.

TOWN MANAGER'S REPORT

1. Mr. Haddad said that as part of the process of taking over the Prescott School and the maintenance of it, the insurance company conducted a safety inspection. He said that based on the inspection the following was reported to him by the Insurance Carrier:

"A safety inspection of your premises was recently completed and the following recommendations were developed: Federal Pacific Electrical Company Panel - The electrical box states "Federal Pacific Electric Company" or the "StabLok" brand on the inside panel, therefore the circuit breaker panel box should be replaced with a UL approved panel for this type of exposure."

Mr. Haddad said that unless they fixed this problem, their insurance would be cancelled adding they had no choice but to fix it. He said that Mr. Tom Delaney had received a rough estimate of between \$10,000 and \$15,000 for this work. Mr. Delaney said that the actual estimated quote from the electrician that he received earlier that day came in at \$9,500. Mr. Haddad said that they had two choices to cover this cost. He said that they could use the money appropriated for the Town's cost of insurance and landscaping and replenish it next Fall, or seek a Reserve Fund Transfer. He said he was concerned that the money for the Town's cost of the building was being rapidly depleted for unforeseen repairs and this would not help. Mr. Haddad said that he and Mr. Delaney were not confident that the money appropriated for three years will actually cover three years given the number of issues they had encountered with the Prescott School since the School Committee vacated the building. Mr. Haddad said that he needed direction from the Select Board and Finance Committee on how to proceed.

Ms. Pine said that they had a line item in their Municipal Building budget for unforeseen things like this and asked why they couldn't use this account. Mr. Haddad said that the Municipal Building budget did not have an allocation for Prescott. Mr. Delaney said that he didn't have enough money in that account for the Prescott School. Mr. Haddad said that they funded \$62K at Town Meeting strictly for Prescott that was not being used for other buildings. Mr. Delaney said that they were still learning about this building and things were going to come up. Ms. Manugian said that the cost to maintain Prescott should be kept separate so that they could better track the expenses for the first few years.

7:15PM - NVTHS - SCHOOL COMMITTEE REPS.

Town Moderator, Jason Kauppi was present. Jeff Kubick, Fay Raynor and Brian LeBlanc were present for the School Committee who called themselves to order. Mr. Robert Flynn was also present.

Ms. Manugian nominated Mr. Rob Flynn to serve as the NVTHS School Committee Representative. Ms. Pine seconded the nomination. Mr. Kauppi closed nominations. Roll Call: Manugian-aye, Pease-aye, Giger-aye, Pine-aye, Kubick-aye, LeBlanc-aye, Raynor-aye, Kauppi-aye

Mr. Haddad said that Patricia Madigan submitted a letter of interest and wanted to continue to serve as an alternate. She was not able to be present.

Ms. Manugian nominated Ms. Patricia Madigan to serve as the NVTHS School Committee Representative. Ms. Pine seconded the nomination. Mr. Kauppi closed nominations. Roll Call: Manugian-aye, Pease-aye, Giger-aye, Pine-aye, Kubick-aye, LeBlanc-aye, Raynor-aye, Kauppi-aye

Mr. Flynn thanked everyone for the support and thanked everyone for coming to the budget breakfast. The School Committee unanimously adjourned at 7:18pm.

TOWN MANAGER'S REPORT - CONT.

Mr. Robertson said that it appeared that \$40K had been spent out of the \$62K appropriated. Mr. Haddad said that if he received a reserve fund transfer, he thought he could get through next year. Mr. Delaney said that he needed money for steam traps also. Mr. Haddad changed his answer and said that he would not be able to make it through next year regardless. Mr. Haddad said that he needed \$9,500 to complete the work required by the insurance company. Mr. Robertson said that because this wasn't an operational ongoing issue this was why they funded it out of free cash and wasn't put into the budget like Ms. Pine thought. Mr. Green said that this was supposed to be a 3-year plan. He asked for an updated financial plan for the next 2 years. Mr. Haddad said he could and would recommend opening the warrant to add an article relative to this. Mr. Haddad said that it appeared they had blown this budget but were obviously blind to what the issues really were at the Prescott School when they put together the budget. He said that they went based on what the School Department had paid and it hadn't been close. Mr. David Manugian said that if they spent \$60K for the first year, he asked if they should they be looking at \$60K for each year moving forward. Mr. Delaney said that \$60K each year might be a little high but added high might be good. Mr. Manugian asked if they should budget high or budget low and come back for additional reserve fund transfers. Mr. Green said that they needed to go back to town meeting and let the voters know they need more money. Mr. Haddad said he would like to wait until the Fall Town Meeting to request more money because of other things that may come up. He said that they needed additional time to evaluate the needs of the building. Mr. Giger said that he thought they should only be doing what was absolutely necessary right now. Mr. Robertson asked what happened if they waited until the Fall Town Meeting and Town Meeting didn't want to fund this any further. Mr. Haddad suggested giving him a week to come back next week with a cost estimate allowing them time to work on it. Ms. Manugian said she thought it was more appropriate to bring this to the Spring Town Meeting because it was a financial article. She said she also thought they should bring it to the voters sooner rather than later.

2. Mr. Haddad said that the GDRSD Committee voted to use \$400,000 in E&D Funds in FY 2020 to offset the proposed budget of the School Superintendent and reduce the proposed Operational Assessments to Groton and Dunstable in FY 2020. He said that Groton's Assessment would be reduced by \$308,731. Mr. Haddad said that should the Select Board and Finance Committee decide to fund the two proposed new Firefighter/EMT's in FY 2020, the proposed Operating Budget would be \$30,161 under the anticipated FY 2020 Levy Limit. Mr. Haddad said that he had updated the Five-Year Projection to show different scenarios and proceeded to present the following scenarios:

Scenario #1 - Original Budget Five Year Projection dated December 18, 2018.

Scenario #2 - Superintendent's Budget (Using their Five-Year Projections from FY 21 through FY 25) and adding two new FF/EMT's in FY 2020, which would require overrides from FY 2020 through FY 2025.

Scenario #3 - Reduced GDRSD Budget using E&D (Using their Five-Year Projections from FY 21 through FY 25) and adding two new FF/EMT's in FY 2020, which would require a large override in FY 2021 and then Overrides from FY 2022 through FY 2025.

Scenario #4 - Same as Scenario #3, but not adding any new FF/EMT's to the Fire Department (which would put the FY 2020 budget \$94,200 under the anticipated FY 2020 Levy Limit).

Mr. Robertson said he had concerns funding the 2 firefighters using E&D of the Schools. Mr. Robertson said he would like to see them hold off on the firefighters until 2021 and do an override then adding it was in line with the study done. Ms. Manugian said that starting the 2-year time period now was concerning adding the report was issued a year and a half ago. Mr. Prest said that they were talking about \$65K for 2 more firefighters or \$25 on the average tax bill. He added that the request from the schools was twice that of the municipal budget.

Mr. Jack Petropoulos said that the Board didn't have enough information a year ago to make a decision and why they held off on it then. He said that they didn't get a cost analysis or alternatives from the Task Force and thought that they were no further ahead than they were a year ago. He said that the study didn't point out the need for additional firefighters. Mr. Petropoulos said that there wasn't a crisis here and that the Board needed to provide the community with the information leaving out their emotions. He said that the data was not about response times but about call firefighter availability. He said that there was no suggestion about how to fix that.

Mr. Prest said that the document he handed out had the information that Mr. Petropoulos was looking for. He said it talked about the mortality rate relative to response times. He said he pointed out last week that medians needed to be given rather than averages adding that that information had been provided by the Fire Department and was not included in the Task Force's final report. Ms. Pine said that her opinion had not changed since last week. She said that they hired 2 additional firefighters already which was more than they had already. She said that they needed to increase on call recruitment. She said that there was data they did not receive from the Task Force which they needed. She said that they needed to act on cost benefits not emotion adding they needed to look at what they could afford. Ms. Connie Sartini asked about funding this at Town Meeting and whether they would have 2 budgets to act on. Mr. Haddad said that they would have 2 budgets if they were asking for an override adding that a voter could always request amending the budget on the floor of Town Meeting but would have to find the money so that the budget was not unbalanced. Mr. Giger said that this decision should go to the voters as an override. He said that they could continue to study this and confuse themselves more adding that they were just continuing to kick this down the road. He said that they needed to let the voters decide. Ms. Manugian said that she agreed in some part but thought they had not done enough work to understand the other priorities coming down the line. She said that they hadn't heard from the Fire Chief yet and thought that was important. Ms. Pine said that it was hard to get an override to pass and thought they should use an override when they were all in agreement not just to see if people wanted to pay for it. Mr. Pease said that he cautioned them to remember that they had a strong chief and should not tell him how to staff his department. Mr. Petropoulos said that bringing it to the voters was what they should do but that there was no expressed need and not enough data to bring forward. Mr. Giger did not think that a year from now they would be in agreement and would have any more data than they did that day. He said that they had data on the table, that there would not be just one solution and people would continue to argue about it. Mr. Green said that they would not have his vote to fund this using E&D from the Schools.

3. Mr. Haddad said that there were two articles on the Spring Town Meeting Warrant that asked the Town to adopt legislation that would allow the Town to charge an excise tax on short-term rental facilities. He said that the Board needed to determine whether or not to proceed with this proposed legislation. He said that Ms. Dunbar had investigated the number of facilities in Town that provide short term rental and the anticipated income should they proceed with the surcharge. He said that the Board needed to take into consideration the cost of implementing this law. He said it would require inspections by their Fire Department and Building Department to ensure code compliance, on top of monitoring various rental and real estate advertisements to determine who was providing this service. Mr. Haddad said that it was his opinion that potential revenue did not justify the effort to pursue this excise tax and recommended that the Board not pursue this legislation at this time and remove the articles from the Warrant. Ms. Pine said that she was not in favor of this. Mr. Giger said that if the expenses were less than the revenue coming in than he would support this. He said he also wanted to know if they could put this in place but not implement it. Mr. Haddad said that he had not received a response from Town Counsel yet on that. Mr. Giger said he wasn't sure they were losing anything right now. Mr. Pease said he agreed that if the expenses were greater than the revenue, he was okay with not implementing this. Ms. Manugian said that she agreed with what she was hearing.

Ms. Pine moved to remove articles 17 and 18 from the 2019 Spring Town Meeting Warrant regarding short term rentals. Mr. Pease seconded the motion. Roll Call: Manugian-aye, Pease-aye, Giger-aye, Pine-aye

4. Mr. Haddad said that he had provided the Board with a letter from KP Law, who serves as Town Counsel for Pepperell and Labor Counsel for Groton. Pepperell has asked KP Law to undertake a review and provide advice on a proposed Intermunicipal Agreement for police detail mutual aid among Pepperell and several surrounding communities, including Groton. Mr. Haddad said that under the Massachusetts Rules of Professional Conduct, Rule 1.7, they needed a determination from the Groton Board stating that their representation of Pepperell would not affect the exercise of independent professional judgment on behalf of the Town of Groton. Mr. Haddad respectfully requested that the Board consider making this determination. Mr. Haddad said that this was standard procedure.

Ms. Manugian said that she would entertain a motion allowing KP Law to represent Pepperell in a review of police detail rates. Mr. Pease made the motion. Ms. Manugian seconded the motion. It was asked that the Town request a copy of what Pepperell was asking for. Mr. Pease withdrew his motion.

5. Ms. Pine asked if the Conservation Commission would have oversight over James Brook dredging in conjunction with the warrant article. Ms. Pine asked about article 23 and the request for additional liquor licenses.

OTHER BUSINESS

Ms. Manugian said that the investigator was planning on starting interviews this week.

Mr. Haddad said that Mr. Pease asked that an item be added to the agenda to discuss the install of anti-littering signs in conjunction with the new bylaw passed at the previous town meeting. He said that Mr. Delaney was not intending on installing signs. Ms. Manugian said she didn't think that signage would stop people from littering in the right of ways. Mr. Giger suggested posting signs near the all are welcome signs reminding people. Ms. Manugian said she didn't object to putting their new bylaw into the tax bill or electric bill. Ms. Pine agreed that posting signs might not have an effect. It was decided that they would wait until after the Spring Town Meeting to do anything and would look at adding something to the light bill.

Ms. Manugian said that they needed to designate someone to serve on the Tri-Town Budget Committee. Mr. Giger said he thought they had something like this already. Mr. Haddad said that the former superintendent coordinated meetings but that it had gone by the wayside. He said that they were trying to rejuvenate this group. Ms. Manugian said that she was interested in doing this.

Mr. Pease moved that they appoint Ms. Manugian to serve on the Tri-Town Budget Committee. Ms. Pine seconded the motion. Roll Call: Manugian-aye, Pease-aye, Giger-aye, Pine-aye

ON GOING ISSUES

H: Mr. Haddad said that the Highway Garage Committee held a public hearing last week. The plans were presented and refined. He said that they were going out to bid next week and had received a preliminary cost estimate. He said that the Committee was meeting the next morning to look at the cost estimates and plans one more time. He said he would have a better update next week.

MINUTES

Mr. Pease moved to approve the minutes of February 25, 2019. Ms. Manugian seconded the motion. Roll Call: Manugian-aye, Pease-aye, Giger-aye, Pine-abstained

Mr. Pease moved to approve the minutes of March 4, 2019. Ms. Pine seconded the motion. Roll Call: Manugian-aye, Pease-aye, Giger-aye, Pine-abstained

The meeting was adjourned at 9:13pm.

Approved: _____
John Giger, Clerk

respectfully submitted: _____
Dawn Dunbar, Executive Assistant

The following supplemental information is added to the official meeting minutes for the Finance Committee for the regular session held on March, 11 2019:

FinCom 2019-03-11

The finance committee resumed their meeting in the break room.

Fin com took up the issue of additional funds for Prescott
Consider reserve fund transfer versus drawing from existing expense budget (60k) and increasing budget
Sense of Committee is to come to town meeting with request to make fund whole for three years with
report on costs to get there

Firefighters

Concerns about funding firefighters given need of override in fy21

Questions about fire report

Option a - hire firefighters this year and stay 158k under levy limit including money from e and d. (Find 128k in savings) Keep 150k in budget for snow and ice

Option b - hire firefighters next year and stay 158k under the levy limit including money from e and d (find 64k in savings)

Committee was in general agreement that these two budgeting approaches should be considered by the Selectboard during their discussions.

158k reflects the feeling that the school's use of excess and deficiency funds were a one time source and some funds should be left within the levy limit to recognize the potential for future funding deficits

Submitted by David Manugian (Clerk)

3/11/19

The attached documents provide factual background information regarding the request for two additional firemen/EMTs in FY2020.

Quick Overview of the Details Contained Below:

- majority of calls are for EMS/Rescue (i.e., ~62%)
- unstaffed hours have much longer response times (11:37 minutes vs 6:05 minutes - about 1.88 times longer)
- average response times should have included variances and standard deviations
- longer response times cause major increases in mortality rates

Please review this summary of the information contained in the documents that are attached or referenced:

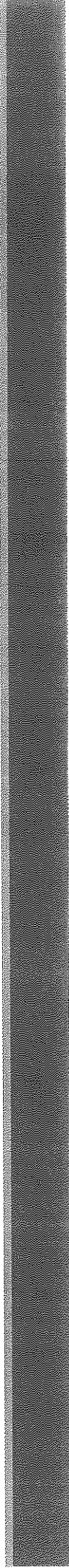
- 1) The Town of Groton Fire Department Task Force was formed on June 18, 2018. The Committee's Charge (<http://www.townofgroton.org/Town/BoardsCommittees/FireDepartmentTaskForceStudyCommittee.aspx>) stated that *"The Task Force Study Committee shall endeavor to complete its work in a reasonable amount of time but should have its recommendation to the Select Board no later than August 31, 2018."*
- 2) Attachment 1 is an abridged version of the presentation given at the December 11, 2018 Fire Department Task Force "Outbrief" provides a brief summary of what was presented that evening.
 - a. Slide #2 shows that about 62% of the 1156 average calls per year were for EMS/Rescue. The slide also shows that the average response time during "staffed" hours (i.e., 6:00 AM to 6:00 PM) was 6:05 minutes and the average response time during "unstaffed" hours (i.e., 6:00 PM to 6:00 AM) was 11:37 minutes. Minutes or almost twice as long as during "staffed" hours.
 - b. Slide #3 shows the Response Time by Hour (on the right side of the slide). Note the variation in the actual response times as a function of when the fire station is "staffed" (i.e., 6:00 AM to 6:00 PM) and when the fire station is "unstaffed" (i.e., 6:00 PM to 6:00 AM). Assuming 4 on staff during the hours of 6:00AM to 6:00 PM, the actual response times range between 4.6 and 7.3 minutes while the actual response time during the unstaffed hours of 6:00 PM to 6:00 AM, the response times range between 8.0 and 24.0 minutes. Note that on the right side of that chart, the "average" response times don't show the large variances or standard deviation in the data shown in the "actual" response times.
 - c. Slide 4 and 5 graphically show that the average "response times are significantly longer when unstaffed."
 - d. Slide 6 again shows the difference in response times between staffed and unstaffed hours, but for some reason takes the average response time during unstaffed hours (11:37 minutes) and subtracts the average response time during staffed hours (6:05 minutes) and averages them to calculate a new average of averages of 7:47 minutes. Then at the bottom of this slide there is a claim that **"Staffing 24 hours per day drives the average response time down 1:42 [minutes]"**. Then slide #7 claims that the **"Benefit to add 2 additional FTE is to decrease average response time by 1:42 (7:47 down to 6:05)"**. These numbers are inconsistent with the actual data that shows an unstaffed average response time of 11:37 minutes and a staffed average response time of 6:05 minutes or a difference of 5:32 minutes. Would not the benefit of adding 2 additional FTE be to reduce that average response time by 5:32 minutes and not as claimed by only 1:42 minutes?
- 3) Attachment 2 titled *"5 articles covering the importance of response - excerpt from February 27, 2019 Fire Department letter to the Select Board & FinCom"* was extracted from a letter from the Fire Department titled "staffing report 2019 (2-24-2019)". This document was emailed to the Select Board and the Finance

Attachment 1

Groton Fire Task Force Committee Outbrief

11 DECEMBER 2018 – ABRIDGED VERSION BY ART PREST

GROTON CENTER FIRE STATION



Call Distribution and Response Times

Call Distribution by Hour

	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Avg
0:00	0.23%	0.12%	0.29%	0.23%	0.26%	0.20%	0.32%	1.5%
1:00	0.20%	0.43%	0.20%	0.37%	0.29%	0.17%	0.12%	1.8%
2:00	0.43%	0.17%	0.29%	0.12%	0.14%	0.29%	0.23%	1.7%
3:00	0.29%	0.20%	0.32%	0.09%	0.14%	0.26%	0.29%	1.5%
4:00	0.35%	0.12%	0.29%	0.20%	0.17%	0.29%	0.03%	1.4%
5:00	0.14%	0.35%	0.14%	0.17%	0.23%	0.14%	0.20%	1.4%
6:00	0.23%	0.37%	0.43%	0.37%	0.29%	0.23%	0.47%	2.1%
7:00	0.49%	0.46%	0.61%	0.81%	0.52%	0.63%	0.49%	4.0%
8:00	0.78%	0.84%	0.95%	0.98%	0.87%	0.92%	0.61%	5.9%
9:00	0.69%	0.95%	0.95%	0.84%	1.04%	0.95%	0.75%	6.2%
10:00	0.61%	1.04%	1.10%	0.78%	1.13%	1.10%	0.89%	6.3%
11:00	0.81%	0.95%	1.24%	1.01%	0.78%	1.17%	0.66%	6.7%
12:00	0.92%	0.89%	1.01%	0.81%	0.89%	0.78%	0.78%	6.1%
13:00	1.01%	1.01%	0.92%	0.89%	0.75%	1.01%	0.69%	6.3%
14:00	0.81%	1.07%	0.92%	0.66%	1.16%	0.87%	0.75%	5.4%
15:00	0.78%	0.92%	1.04%	0.84%	1.24%	0.92%	0.52%	6.3%
16:00	0.84%	1.15%	0.92%	0.87%	0.98%	1.07%	0.87%	6.7%
17:00	0.75%	0.89%	0.84%	0.98%	0.89%	0.69%	0.72%	5.8%
18:00	0.78%	0.52%	0.58%	0.61%	0.75%	0.84%	0.58%	4.6%
19:00	0.87%	0.58%	0.49%	0.75%	1.30%	0.43%	0.66%	5.1%
20:00	0.81%	0.52%	0.49%	0.72%	0.37%	0.35%	0.55%	3.8%
21:00	0.43%	0.69%	0.49%	0.52%	0.43%	0.37%	0.32%	3.3%
22:00	0.46%	0.26%	0.35%	0.26%	0.49%	0.43%	0.43%	2.7%
23:00	0.32%	0.40%	0.26%	0.29%	0.17%	0.14%	0.26%	1.8%
	14.0%	14.9%	15.1%	14.2%	15.5%	14.4%	11.9%	100.0%

Busiest: 8AM - 8PM

2 on staff
4 on staff

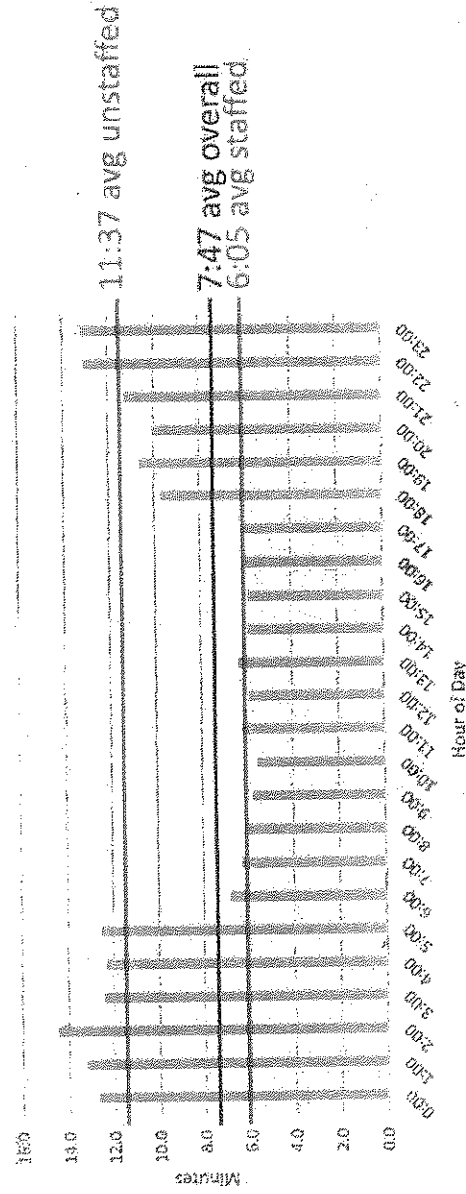
Response Time by Hour

	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Avg
0:00	12.4	10.8	12.4	12.1	12.2	13.0	14.7	12.7
1:00	14.6	13.5	12.3	12.3	13.2	14.7	13.3	13.3
2:00	16.3	12.2	12.9	14.5	12.4	14.6	16.4	14.5
3:00	8.7	13.6	14.3	8.3	11.0	14.3	13.7	12.5
4:00	13.1	9.8	10.5	13.1	13.2	12.2	24.0	12.4
5:00	7.4	12.8	15.2	14.0	13.4	12.4	12.0	12.6
6:00	10.3	6.6	6.5	5.9	7.8	5.0	6.8	6.9
7:00	6.2	6.6	6.0	6.8	6.9	5.1	6.9	6.3
8:00	6.1	5.5	5.8	6.5	6.1	6.9	5.9	6.1
9:00	8.4	5.8	5.8	5.7	5.1	5.2	5.5	5.8
10:00	7.2	5.4	5.5	3.9	6.9	4.6	6.0	5.6
11:00	7.9	5.9	5.8	6.0	5.6	5.9	7.3	6.2
12:00	6.1	5.8	5.3	7.3	5.1	6.0	6.4	6.0
13:00	6.8	6.8	6.0	6.1	6.2	5.9	7.2	6.4
14:00	5.7	6.7	6.7	5.0	5.3	6.4	5.8	6.0
15:00	6.2	6.2	5.1	6.3	6.1	5.4	6.7	5.9
16:00	6.5	5.9	7.1	5.2	5.4	6.0	6.9	6.1
17:00	6.0	5.7	5.9	6.5	6.0	6.6	7.0	6.2
18:00	9.7	11.4	9.6	10.1	8.0	9.1	11.4	9.8
19:00	10.4	10.1	10.1	11.4	10.4	10.2	12.1	10.7
20:00	11.1	9.3	11.2	9.0	9.2	11.3	9.8	10.1
21:00	11.4	10.4	11.1	9.7	12.0	12.6	13.6	11.3
22:00	15.2	11.4	11.2	11.8	12.2	14.0	14.4	13.1
23:00	12.7	10.7	11.1	14.8	14.7	17.0	15.0	13.2
	8.6	7.5	7.4	7.6	7.5	7.5	8.6	7.8

Fastest: 6AM - 6PM

Response Times

Average Response Times by Hour of Day



Response times are significantly slower when unstaffed.

Typically 5-6 minutes slower in all categories and overall.

Staffed: 6:05 minute response
 Unstaffed: 11:37 minute response
 Overall: 7:47 minute response

*this slide is from early draft of presentation

Summary

Scheduling challenges were ameliorated by Town Meeting vote to fund 2 FTE, at ~\$150K/year

- Two new FTE used for depth, not increased coverage.

Response time is 5-6 minutes slower when fire house is unstaffed.

- 70% of calls occur during staffed hours.

Cost to add

- First 2 FTE ~\$150K/year
- Next 2 FTE to achieve 24 hour coverage is an additional ~\$80K/year.

Benefit to add 2 additional FTE is to decrease average response time by 1:42 (7:47 down to 6:05)

Risks include reigniting the staffing challenge, and/or deleterious effects on the call personnel

References:

1. Fire Department Task Force Study Committee, Committee Outbrief [Powerpoint Slides], <http://www.townofgroton.org/Town/BoardsCommittees/FireDepartmentTaskForceStudyCommittee.aspx>
2. JAMA Surgery - Emergency Medical Service Response Times in Rural, Suburban and Urban Areas, July 19, 2017.
<https://jamanetwork.com/journals/jamasurgery/fullarticle/2643992>
 - Quick press release from the American College of Emergency Physicians (ACEP) about this: <http://newsroom.acep.org/2017-07-19-Rural-Patients-Wait-Longest-for-EMS>
3. The American Journal of Surgery - Does increased emergency medical services prehospital time affect patient mortality in rural motor vehicle crashes? A statewide analysis, January 2009.
<https://www.sciencedirect.com/science/article/pii/S0002961008002699>
4. The Journal of the American Heart Association - Survival From Out-of-Hospital Cardiac Arrest: Are We Beginning to See Progress? September 22, 2017.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5634321/>
5. Health Economics - Do emergency medical system response times matter for health outcomes? 2013.
6. Prehospital Emergency Care - Emergency Medical Services Response Time and Mortality in an Urban Setting. January 2012.

be exempt from review by the institutional review board at the Wake Forest Baptist Medical Center.

Results

Data were provided for 1 796 987 EMS encounters. There were 625 encounters identified as outliers and excluded as described here. Table 1 provides the distribution of encounter types in the database. A total of 71% of encounters (n = 1 275 529) resulted in transport of a patient by the primary EMS unit. There were 70 189 encounters (3.9%) from rural zip codes, 1 576 019 (87.7%) from suburban zip codes, and 150 779 (8.4%) from urban zip codes. Table 2 provides time data for the various encounter types by population category.

Discussion

Emergency medical service units average 7 minutes from the time of a 911 call to arrival on scene. That median time increases to more than 14 minutes in rural settings, with nearly 1 of 10 encounters waiting almost a half hour for the arrival of EMS personnel. Longer EMS response times have been associated with worse outcomes in trauma patients.³ In some, albeit rare, emergent conditions (eg, cardiopulmonary arrest, severe bleeding, and airway occlusion), even modest delays can be life threatening.⁴ Our data are limited in that most encounters derive from urban cluster zip codes and are derived from a convenience sample as opposed to a selected series of representative census tracts. However, the large sample size provides external validity to our findings.

Research suggests that bystanders trained in first aid can and will effectively assist the ill and injured in their time of need.^{5,6} Our data suggest that there is an interval for bystander intervention between 911 system engagement and EMS arrival. Recognizing that "you are the help until help arrives" may be lifesaving.

Does increased emergency medical services prehospital time affect patient mortality in rural motor vehicle crashes? A statewide analysis

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Abstract

Background

Fatality rates from rural vehicular trauma are almost double those found in urban settings. It has been suggested that increased prehospital time is a factor that adversely affects fatality rates in rural vehicular trauma. By linking and analyzing Alabama's statewide prehospital data, emergency medical services (EMS) prehospital time was assessed for rural and urban vehicular crashes.

Methods

An imputational methodology permitted linkage of data from police motor vehicle crash (MVC) and EMS records. MVCs were defined as rural or urban by crash location using the United States Census Bureau criteria. Areas within Alabama that fell outside the Census Bureau definition of urban were defined as rural. Prehospital data were analyzed to determine EMS response time, scene time, and transport time in rural and urban settings.

Results

Attachment 6

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Survival From Out-of-Hospital Cardiac Arrest: Are We Beginning to See Progress?

Stuart Berger, MD¹

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Introduction

In its June 2015 publication, *Strategies to Improve Cardiac Arrest Survival: A Time to Act*, The Institute of Medicine (IOM) delineated the public health impact and scope of the problem of cardiac arrest in the United States. The IOM emphasized that although the survival rate varies widely across the country, it is generally low.¹ The IOM noted survival of <6% when cardiac arrest occurs outside the hospital and only 24% when cardiac arrest occurs inside the hospital. The IOM made specific recommendations to improve cardiac arrest survival, especially in the areas of data collection, education, and engagement of the public. The report emphasized the need to centralize the collection and distribution of data, monitor and improve the delivery of care, increase the impact of research and therapies, and strengthen stakeholder communication. The article by Van Diepen et al in this issue of *JAHA—Journal of the American Heart Association* reports on the first steps needed to fulfill many of the recommendations of the IOM report.²

Van Diepen and colleagues² report data from the initial 5 years of the HeartRescue Project, a multistate public health initiative focused on establishing state-wide out-of-hospital cardiac arrest (OHCA) systems of care to improve case capture rate and ultimately use the derived data to improve OHCA care at the community, the emergency medical services (EMS), and hospital levels. The initial data from the HeartRescue Project, reported by the authors, represent the first step in achieving the IOM recommendations. The HeartRescue Project has created a large US population-based registry that now captures almost 90% of all-rhythm OHCA in the participating states. The authors documented a modest temporal increase in prehospital bystander cardiopulmonary resuscitation (CPR) and bystander automated external defibrillator (AED) application, with survival that has exceeded that reported in the IOM article.¹ Specifically, this public health initiative increased the capture rate of OHCA over a 5-year period from 39% to 89.2%. Bystander CPR was provided for 42.8% of people with OHCA, bystander AED application occurred in 4.6% of arrests, and AED application by bystanders, police, or first responders before EMS arrival occurred in 21.9% of OHCA.

EMS arrival. In 2013, Drezner et al reviewed the survival to hospital discharge from sudden cardiac arrest from 2009 to 2011 from a national registry of AED use in sports, involving >2000 high schools with CPR-AED programs.⁶ The overall survival was 71%; survival in student athletes and in adults who were exercising at the time of arrest was 89%. This exceptional survival was associated with a 96% incidence of lay rescuer CPR. These studies demonstrate the improvements in OHCA survival that are possible in association with bystander recognition of cardiac arrest and bystander performance of CPR and use of an AED.

How can we increase bystander/community recognition of OHCA and bystander CPR and AED use? One important approach is the implementation of strategies to increase public awareness about the issues associated with sudden cardiac arrest. It is not clear that the public understands the scope of this problem, with >347 322 adults experiencing EMS-treated OHCA each year.⁷ Data regarding the incidence of OHCA in children and adolescents are more limited, but the incidence is estimated to be several thousand per year.⁷ Information gleaned from EMS dispatchers indicate that the public does not understand the difference between a “heart attack” and sudden cardiac arrest. In addition, the public does not expect that sudden cardiac arrest can occur in a child or adolescent. Public service announcements could provide one mechanism to increase public awareness. Public service announcements developed and aired in cooperation with the National Football League, National Basketball Association, and/or National Hockey League specific sporting events could reach millions. There are many potential uses of public service announcements, such as airing in movie theaters and at the beginning of streaming videos or even video games.

In addition to public awareness, avenues to increase CPR-AED education of the public are critical to increase bystander CPR and AED use and improve survival. Partnership with the American Heart Association, the American Red Cross, and other professional and advocacy organizations can increase training. Mass CPR training endeavors are important, and innovative strategies, such as the American Heart Association CPR training kiosks placed in airports, can increase the reach of CPR training efforts.

An additional critically important endeavor is CPR-AED education for students before high school graduation. This concept makes sense. If students learn CPR-AED use before graduation, they will increase the number of bystanders that can recognize a cardiac arrest and have the skills, the ability, and the willingness to intervene.

In 2014, the American Heart Association reported that 27 states had passed laws or adopted curriculum changes to require hands-on CPR training before high school graduation.⁸ This endeavor resulted in >1.6 million students being trained in CPR in the 2013 to 2014 academic year. Currently, 37 states mandate teaching CPR and AED use to students, further increasing the potential number of students who learn CPR-AED each year. We must continue to advocate until all 50 states have mandates for CPR-AED education for all high school students, and create the resources that teachers need. This is just a start. Advocacy for mass CPR education will further increase the pool of bystanders able to provide CPR and use AEDs.

Drezner et al⁶ demonstrated that, in the specific and specialized location of the schools, we can create environments where the incidence of bystander CPR and AED use is high and OHCA survival is also high. Project ADAM, a project directed at students and schools, was created in 1999 after the sudden cardiac deaths of several students in southeastern Wisconsin. The goals of

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Emergency Medical Services Response Time and Mortality in an Urban Setting

Prehospital Emergency Care 16(1):142-51 · January 2012

Abstract

A common tenet in emergency medical services (EMS) is that faster response equates to better patient outcome, translated by some EMS operations into a goal of a response time of 8 minutes or less for advanced life support (ALS) units responding to life-threatening events. To explore whether an 8-minute EMS response time was associated with mortality. This was a one-year retrospective cohort study of adults with a life-threatening event as assessed at the time of the 9-1-1 call (Medical Priority Dispatch System Echo- or Delta-level event). The study setting was an urban all-ALS EMS system serving a population of approximately 1 million. Response time was defined as 9-1-1 call receipt to ALS unit arrival on scene, and outcome was defined as all-cause mortality at hospital discharge. Potential covariates included patient acuity, age, gender, and combined scene and transport interval time. Stratified analysis and logistic regression were used to assess the response time-mortality association. There were 7,760 unit responses that met the inclusion criteria; 1,865 (24%) were ≥ 8 minutes. The average patient age was 56.7 years (standard deviation = 21.5). For patients with a response time ≥ 8 minutes, 7.1% died, compared with 6.4% for patients with a response time ≤ 7 minutes 59 seconds (risk difference 0.7%; 95% confidence interval [CI]: -0.5%, 2.0%). The adjusted odds ratio of mortality for ≥ 8 minutes was 1.19 (95% CI: 0.97, 1.47). An exploratory analysis suggested there may be a small beneficial effect of response ≤ 7 minutes 59 seconds for those who survived to become an inpatient (adjusted odds ratio = 1.30; 95% CI: 1.00, 1.69). These results call into question the clinical effectiveness of a dichotomous 8-minute ALS response time on decreasing mortality for the majority of adult patients identified as having a life-threatening event at the time of the 9-1-1 call. However, this study does not suggest that rapid EMS response is undesirable or unimportant for certain patients. This analysis highlights the need for further research on who may benefit from rapid EMS response, whether these individuals can be identified at the time of the 9-1-1 call, and what the optimum response time is.